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## AUDIT AND QUALITY CONTROL OF FOOD PRODUCTS IN EU COUNTRIES AND THE WORLD

*The article examines regulatory legal acts and other documents and literary sources regarding state control of food safety and quality in Great Britain, Germany, France, the USA and Japan. The health of every nation largely depends on the quality and safety of food products. In any country, at the state level, requirements for product safety and quality are regulated and their compliance is ensured. One of the methods of such provision is state control. The article analyzes the practices of controlling the quality and safety of food products in the USA, Germany, France, Great Britain and Japan. It was revealed that there are both common and special rules in the practice of controlling the quality and safety of food products in the studied countries. In all countries, control over the quality and safety of food products is carried out by state bodies. In all countries, during control, special attention is paid to the reliability of product labeling. Improper labeling entails banning the sale of products, removal from circulation or destruction of particularly dangerous products, and even criminal liability in France and the USA. The main responsibility for dangerous food products in all countries is borne by the manufacturers or suppliers of the products who put them into circulation. In the USA and Japan, information about the presence of allergens in a food product must be included in the labeling. In the USA, in order for the manufacturer's products to be able to be supplied for a government order, the enterprise must implement a quality management system in accordance with the requirements of ISO 9001, and in Japan, in order to obtain a permit for the manufacture of food products, it is necessary to prove that proper sanitary and hygienic control is ensured by implementing HACCP system. In Germany, Great Britain, and Japan, quality and safety control is entrusted to local self-government bodies. In Germany, there is a product safety monitoring program throughout the territory, which makes it possible to monitor the appearance of dangerous products on the market, as well as to check the effectiveness of the established MPC of dangerous substances. The presence of "passports" for ready-made food products is checked only in France, although such a document is mandatory in EU countries. In France and Japan, exceptional importance is attached to the education of schoolchildren on food safety issues.*

*Keywords: HACCP, audit, quality management system, critical control points, state control, quality and safety, food products.*

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## АУДИТ І КОНТРОЛЬ ЯКОСТІ ХАРЧОВИХ ПРОДУКТІВ У КРАЇНАХ ЄС ТА СВІТУ

*У статті розглянуто нормативно-правові акти та інші документи та літературні джерела щодо державного контролювання безпечності та якості харчових продуктів у Великій Британії, Німеччині, Франції, США та Японії. Від якості та безпечності харчових продуктів великою мірою залежить здоров'я кожної нації. В будь-якій країні на державному рівні регулюють вимоги, щодо безпечності та якості продукції й забезпечують їх дотримання. Одним зі способів такого*

забезпечення є державне контролювання. У статті проаналізовано практики контролювання якості та безпечності харчових продуктів у США, Німеччині, Франції, Великій Британії та Японії. Виявлено особливості, що у практиці контролювання якості та безпечності харчових продуктів у вивчених країнах є як спільні правила, так і особливі. В усіх країнах контроль за якістю і безпечністю харчових продуктів здійснюють державні органи. В усіх країнах під час контролювання особливо увагу звертають на достовірність маркування продукції. За неправильне маркування передбачено заборону реалізації продукції, вилучення з обігу або знищення особливо небезпечної, а у Франції та США – навіть кримінальну відповідальність. Основну відповідальність за небезпечну харчову продукцію в усіх країнах несуть виробники або постачальники продукції, які надали її в обіг. У США та Японії обов'язково в маркуванні має бути інформація щодо наявності алергенів у харчовому продукті. У США, щоб продукцію виробника можна було постачати для державного замовлення, на підприємстві має бути впроваджено систему управління якістю згідно з вимогами ISO 9001, а в Японії, щоб одержати дозвіл на виготовлення харчових продуктів, необхідно довести, що забезпечено належний санітарно-гігієнічний контроль упровадженням системи HACCP. У Німеччині, Великій Британії, Японії контролювання якості та безпечності покладено на органи місцевого самоврядування. У Німеччині на всій території діє програма моніторингу безпечності продукції, що дає можливість відстежувати появу на ринку небезпечної продукції, а також перевіряти дієвість установлених ГДК небезпечних речовин. Наявність «паспортів» на готовий харчовий продукт перевіряють лише у Франції, хоча такий документ у країнах ЄС обов'язковий. У Франції та Японії виняткове значення приділяють освіті школярів з питань безпечності харчових продуктів.

Ключові слова: HACCP, аудит, система управління якістю, критичні точки контролю, державне контролювання, якість та безпечність, харчові продукти.

## STATEMENT OF THE PROBLEM IN A GENERAL FORM AND ITS CONNECTION WITH IMPORTANT SCIENTIFIC OR PRACTICAL TASKS

The health of every nation largely depends on the quality and safety of food products. Therefore, in any country, the requirements for product safety and quality are regulated at the state level and their compliance is ensured. One of the methods of such provision is state control. Ukraine aspires to become a member of the EU. An association agreement was signed between Ukraine and the EU, according to which our state undertook to bring its sphere of technical regulation as close as possible to EU legislation. And in fact, a lot has already been done in this direction.

## ANALYSIS OF THE LATEST RESEARCH

Many works of domestic scientists, including L. Vitkin, D. Lutsenko, G. Khimicheva, Yu. Sliva, N. Silonova, A. Zenkin, and others, are devoted to the coverage of international practice in the field of ensuring the quality and safety of food products. Dynamic changes related to the harmonization of food legislation with the relevant norms of the European Union and best global practices require constant monitoring and detailed study, and this determines the relevance and timeliness of this article. Of particular interest is information on quality and safety control in other countries in order to use this practice or to make sure that it is not appropriate to focus on some specifics.

However, a number of problematic issues still do not have a final scientific solution. This primarily concerns the economic and organizational aspects of audit, development and implementation of the HACCP system in the production of food products.

## FORMULATION OF THE GOALS OF THE ARTICLE

For this purpose, the work analyzes the practices of controlling the quality and safety of food products in the USA, Germany, France, Great Britain and Japan.

## PRESENTING MAIN MATERIAL

Each state has its own legal acts and administrative infrastructure. Let's dwell on some features. State control of the safety and quality of food products in the USA is carried out by the Food and Drug Administration (FDA). This organization is one of the oldest and most reliable consumer protection services. The FDA's activities are primarily governed by the Federal Food, Drug, and Cosmetic Act and include testing food samples for hazardous substances and verifying the accuracy of information contained on labels. In the case of detection of violations, the Office offers the manufacturer to eliminate the defect or withdraw low-quality products from the market, which is the fastest and most effective way to protect consumer rights. Withdrawal of products in the USA was called "recall campaign" (Recall campaigns). This is a series of measures to inform consumers who have purchased a low-quality product about the return of all products of this batch to the manufacturer.

The FDA has powerful legal leverage that allows it to ban the sale of substandard products through the courts, to recall and destroy products that have been manufactured, and to hold the manufacturers themselves administratively or criminally liable. The US Food Safety and Inspection Service (FSIS) and the US Department of Agriculture (USDA) are the US health regulatory agencies responsible for ensuring the quality and safety of meat, poultry, and egg products, as well as ensuring that labeling is correct. .

FSIS ensures that food is safe for consumption based on a system called Pathogen Reduction/Hazard Analysis and Critical Control Points (PR/HACCP). FSIS inspectors monitor livestock and poultry slaughterhouses and processing plants. It is forbidden to use hormones and steroids for animals, and antibiotics are used in limited

quantities and removed 10 days before slaughter. FSIS also conducts internal inspections of establishments, testing products for microbiological, chemical hazards, toxins, additives, and inspecting and analyzing food products when they are imported. FSIS relies on the Federal Meat Inspection Act, the Poultry Products Inspection Act, and the Egg Products Inspection Act.

In the USA, a motivation system was created for food producers with the aim of certification of production, implementation of quality and safety management systems. For example, enterprises that have not passed certification according to the QS-9000 system (a quality standard based on the principles of the ISO 9000 series of international standards) cannot participate in the competition for receiving orders for the supply of products for government needs. The active development of the agricultural production certification system in the USA is facilitated by the implementation of the USDA National Organic Program. The regulatory framework is aimed at creating a quality control system at all stages of production, starting with the control of soil, fertilizers, raw materials, additives, etc., the finished product at the stage of production and sale.

The HACCP system (Hazardous Factor Analysis and Control at Critical Control Points), which determines and constantly monitors product safety, has been implemented at almost all processing and catering enterprises, large retail chains, and wholesale warehouses. The presence of a food safety management system at the enterprise is a minimum requirement for exporting products to the EU and other large markets. In addition to the HACCP system, enterprises (with the exception of meat and fish processing, juice production) use the Safe Quality Food - SQF system. It is a rigorous food safety program recognized by retailers, brand owners and food service providers worldwide. Also, this program is recognized by the Global Food Safety Initiative (GFSI) [1]. In 2011, the Association of Grocers and the Institute of Food Marketing developed a new food labeling system, which provides for the indication of the calorie content of the product, the amount of saturated fatty acids, the amount of trans isomers of fatty acids, vitamins and macronutrients.

Processors are required to label products with the content of the main food allergens: milk, eggs, peanuts, nuts, fish, shellfish, wheat and soy protein. The label must indicate exactly which ingredient from this group is contained in the finished product [2].

In Germany, food quality and safety control has a decentralized approach and is carried out by the "land" structures of the Federal Ministry of Food, Agriculture and Consumer Protection (BMELV). BMELV provides support to various organizations that carry out tasks in the field of communication and representation of consumer interests. Along with legislative work, the competence of this Ministry also includes the development of other measures in the field of risk management. It bears overall responsibility for the selection of appropriate measures. The scientific work is carried out by the Federal Institute for Risk Assessment (BfR) and four other research institutes that provide consulting assistance to the Ministry. As part of practical work, the Ministry is supported by the Federal Office for the Protection of Consumer Rights and Food Safety (BVL), which coordinates work between federal, state and EU authorities. Employees of city and district bodies for food safety control and veterinary supervision carry out selective control of products and quality management systems of enterprises. Ministries of federal lands coordinate activities in the field of supervision at the level of the lands. Representatives of the states, in turn, closely cooperate with federal authorities, for example, during the coordination of federal programs for quality control and product safety, as well as in the event of crises related to food products.

The main responsibility for the safety of food products lies primarily with the owners of food production and distribution enterprises, whether it is an industrial enterprise, a farmer, a baker or a restaurant owner, and then with the supervisory authorities. In food law, there is a special concept for this "duty to exercise due diligence". The responsibility of a food manufacturing enterprise always begins with the selection of raw materials and ingredients and ends only when a product of "perfect quality", well packaged and correctly labeled leaves its enterprise. A manufacturer's failure to exercise due diligence can have serious consequences, as it is liable for damage caused by substandard products.

A feature of food quality and safety control in Germany is monitoring, which has been carried out by federal and state authorities since 1995, during which sampling is carried out not depending on the risk, but representative for the whole of Germany. About 4,700 samples of products are examined per year for the content of undesirable and harmful substances, such as plant protection products, heavy metals and other contaminants. Based on these results, the Federal Agency (BVL) prepares a report on monitoring the quality and safety of food products. Monitoring results are taken into account during the risk assessment of product safety for health and are used to verify the correctness of the established maximum permissible levels of undesirable substances. In general, German food legislation covers more than 200 regulations, laws and decisions, ranging from provisions on the limits of permissible concentrations of pesticide residues to the right of consumers to receive information [3, 8].

In France, the issue of food quality and safety is of a strategic nature. French laws governing the release of safe food products have been developed taking into account national characteristics, but in accordance with the requirements of the main EU legislation. In particular, Regulations No. 178/2002 dated January 28, 2002 [4], No. 852/2004 dated April 29, 2004 [5], No. 853/2004 dated April 29, 2004 [6], No. 854/2004 dated April 29, 2004 year and No. 882/2004/EU dated April 29, 2004 [7]. These documents establish requirements for production hygiene, product safety indicators, and the procedure for state and production control (the so-called departmental and self-

control). The basis of the French national food safety policy is the principle of responsibility of each participant in the production and trade chain - from raw material suppliers to the final consumer. At the same time, the state guarantees a high level of consumer protection. The main guarantors are the Ministry of Agriculture and Fisheries, the Ministry of Health, as well as the Ministry of Trade and Consumer Affairs. Issues of direct monitoring of food safety are dealt with by the powerful General Directorate for Food Affairs, which belongs to the structure of the Ministry of Agriculture and Fisheries. It monitors product quality, compliance with technological requirements during production, controls food supply throughout the country. Sanitary supervision in France is carried out by more than eight thousand civil servants. On the ground, this work is coordinated by a representative of the central government - the prefect. Controllers regularly conduct inspections of food producers.

Control of the trade network and public catering establishments is carried out by representatives of the General Directorate for Consumer Affairs, Competition and Anti-Fraud. First of all, they check the availability of so-called product "passports", which have been mandatory for all EU countries since 2005. These documents provide detailed information about the raw materials used, ingredients, additives, etc. and the finished food product. Current food legislation in France is aimed at combating diseases such as diabetes, cardiovascular disease, some types of cancer, and obesity. Thus, the National Food Safety Agency is developing measures to reduce the content of salt, sugar and unsaturated fatty acids in the products most popular with the French. Since 2017, the new law "On improving the quality of food products and promoting proper nutrition" provided for the placement of a diagram on the packaging of food products, which classifies them into five categories (A, B, C, D, E) according to the level of quality and degree of usefulness for the consumer. Electives on the topic of promoting proper nutrition, supported by the government, have been introduced in French schools [9].

In Great Britain, food compliance policy involves cooperation between business and enforcement agencies. Executive bodies are recommended to actively cooperate with business, especially small and medium-sized enterprises, to conduct consultations on compliance with the requirements of technical regulations, to provide an opportunity to discuss each specific case of non-compliance before taking official punitive measures. Guided by the principles of the EU directives of the "new" and "global" approaches, the Trading Standards Departments exchange information and facilitate such cooperation based on the "principles of local authority". And this means that each local self-government body is responsible for supervision in the field of safety and quality of products and services in accordance with its competence. Businesses can contact local authorities for advice and recommendations on precautionary measures. Criminal liability is the ultimate measure of punishment and is used only when advice and consultation failed to ensure compliance of products with legal requirements.

Public authorities supervise the market in Great Britain. The executive body is responsible for making a decision on compliance of products with established requirements. Central and local governments ensure a fair and safe trading environment through open and efficient procedures. In the case of supplying products to the market or putting into operation equipment that does not meet the established requirements or which is prohibited to supply due to its danger, according to the Law on the Protection of Consumer Rights, such products are subject to seizure, the manufacturer loses the right to ownership and the products are destroyed by court decision. Such a manufacturer may be fined or imprisoned for up to six months. In case of violation of health and safety requirements, the offender may be fined in the amount of 5 thousand ANG. pounds, or imprisoned for up to two years, or both. In addition, products are confiscated, seized, stopped or banned from production. Information about products, manufacturers and suppliers is stored in a national database, which is accessible to all controllers and is an effective means of communication and ensures the cooperation of different local authorities. This mechanism is often used to transmit information about the presence of non-compliant products on the market, which allows prompt legislative measures to be taken. The database is a closed system on the Internet [10].

In Japan, regulation of food safety is carried out on the basis of the Food Sanitation Act, adopted in 1947 and repeatedly revised as necessary. This law covers a wide range of issues related to food and foodstuffs. It also applies to additives, covering natural flavorings, and equipment and containers/packaging used to transport, manufacture, process or deliver food. The law also applies to persons engaged in food-related activities, such as food production and importation. Since Japan imports more than 60% of its food, much attention is paid to the safety of imported food. The law stipulates that the specifications in the standards for food products or supplements intended for sale are established by the Ministry of Health, Labor and Welfare (MoHSPD), which is authorized, if necessary, to establish the necessary standards and specifications without revising the law itself, for example, to regulate safety genetically modified products. The provisions of this law gave an important role to local self-government bodies in regulating the safety of food products, and the MoZPD shares responsibility with these bodies [11].

Each local government body takes the necessary measures against enterprises located in the area under its jurisdiction, which include setting necessary standards for enterprises and outlets, issuing or suspending licenses, counseling and full or temporary banning of enterprises. At the local level, ensuring the safety of food products is entrusted to another type of administrative organizations, which are called health centers and are solely responsible for health and hygiene. The effect of this Law on Food Sanitation in the country extends to almost four million enterprises and outlets, which receive operating licenses from the Ministry of Health, Labor and Welfare [12].

Japan uses a health control system based on hazard analysis by critical points (HACCP). This system was introduced back in 1995, when the Law on Food Sanitation was revised. Since 1998, to encourage food industry enterprises to implement the HACCP system at the legislative level, financial support, tax incentives, low interest for long-term loans, necessary for improving premises and equipment, have been provided. If it is proven that there is sufficient hygienic control for food products in accordance with the HACCP system, the Ministry of Health, Labor and Welfare grants permission for the operation of individual enterprises for the production or processing of the relevant groups of food products.

Production or processing methods approved within the framework of the HACCP system are considered to be the corresponding production or processing standards provided for by law. This means that the system makes it possible to apply a wide range of food production methods. Due to the increase in allergic diseases and consumer concern about allergies caused by the consumption of food products, Japan has introduced mandatory labeling requirements for such products. In Japan, great attention is paid to the formation of consumer knowledge about the safety of food products, which is why education of schoolchildren on food safety issues is of utmost importance. Such programs receive government support.

### CONCLUSIONS FROM THIS STUDY AND PROSPECTS FOR FURTHER RESEARCH IN THIS DIRECTION

Summarizing the above, it can be stated that there are both common and special rules in the practice of controlling the quality and safety of food products in the studied countries.

- In all countries, control over the quality and safety of food products is carried out by state bodies.
- In all countries, during control, special attention is paid to the reliability of product labeling. Improper labeling entails banning the sale of products, removal from circulation or destruction of particularly dangerous products, and even criminal liability in France and the USA.
- The main responsibility for dangerous food products in all countries is borne by the manufacturers or suppliers of the products who put them into circulation.
- In the USA and Japan, information about the presence of allergens in a food product must be included in the labeling.
- In the USA, in order for the manufacturer's products to be supplied for a government order, the company must implement a quality management system in accordance with the requirements of ISO 9001, and in Japan, in order to obtain a permit for the manufacture of food products, it is necessary to prove that proper sanitary and hygienic control is ensured implementation of the HACCP system.
- In Germany, Great Britain, and Japan, quality and safety control is entrusted to local self-government bodies.
- In Germany, a product safety monitoring program is in place throughout the territory, which makes it possible to monitor the appearance of dangerous products on the market, as well as to check the effectiveness of the established MPC of dangerous substances.
- The presence of "passports" for ready-made food products is checked only in France, although such a document is mandatory in EU countries.
- In France and Japan, exceptional importance is attached to the education of schoolchildren on food safety issues.

### References

1. Rehlament Yevropeiskoho Parlamentu ta Rady YeS № 178/2002 vid 28.01. 2002 «Pro vstanovlennia zahalnykh pryntsyypiv i vymoh v prodovolchomu pravi, pro stvorennia yevropeiskoho orhanu z bezpeky kharchovykh produktiv i pro vstanovlennia protsedury zabezpechennia bezpeky kharchovykh produktiv».
2. Rehlament Yevropeiskoho Parlamentu ta Rady YeS № 852/2004 vid 29.04.2004 «Pro hihiienu kharchovykh produktiv».
3. Rehlament Yevropeiskoho Parlamentu ta Rady YeS № 853/2004 vid 29.04.2004 «Pro vstanovlennia spetsialnykh hihiienichnykh pravyl, shcho pidliahaiu zastosuvanni do prodovolchykh tovariv tvarynnoho pokhodzhennia».
4. Rehlament Yevropeiskoho Parlamentu ta Rady YeS № 854/2004 vid 29.04.2004 «Pro vstanovlennia osoblyvykh pravyl orhanizatsii ofitsiinoho kontroliu nad produktiieiu tvarynnoho pokhodzhennia, pryznachenoi dlia spozhyvannia liudynoiu v yizhu».
5. Rozporiadzhennia Yevropeiskoho Parlamentu ta Rady YeS № 882/2004/IeS vid 29.04.2004 z pytannia pro ofitsiini kontroli, shcho provodiatsia z metoiu perevirky vidpovidnosti kormovomu ta kharchovomu zakonodavstvu, a takozh pravylam, stosuiutsia zdorovia tvaryn i blahopoluchchia tvaryn.
6. Systema bezpeky kharchovoi produktsii ta kormovykh resursiv Nimechchyny v konteksti zahalnoievropeiskykh vymoh [Elektronnyi resurs] / Rezhym dostupu do resursu: <http://nedin-seminar.kpi.ua/public/conferences/13/14/pr113.pdf>
7. Kontrol i nahliad v Velykobrytanii // Svit standartiv. – 2006. – № 7(8). – S.97–101.
8. About The SQF Program [Elektronnyi resurs] / Rezhym dostupu do resursu: <https://www.sqfi.com/why-get-certified/about-sqf-program/>
9. Bal-Prylypko L., Tolok H., Brovenko T., Kryvoruchko M., Horkun A. (2024). Akredytatsiia i perspektyvy vprovadzhennia systemy HACCP u vyrobnytstvi kharchovoi produktsii. MEASURING AND COMPUTING DEVICES IN TECHNOLOGICAL PROCESSES, (1), 111–116.
10. DU «UkrNDNU» Ukrainnyi naukovo-doslidnyi i navchalnyi tsentr problem standartyzatsii ta sertyfikatsii ta yakosti / Ofitsiinyi sait. – Rezhym dostupu: <http://www.ukrndnc.org.ua>
11. Systema NASSR v zhe efektyvno pratsiuie na 99% pidpriemstv. – Rezhym dostupu: <http://regionews.com.ua/node/56850>
12. Zvit «Vprovadzhennia system upravlinnia bezpechnistiu kharchovykh produktiv na ukraïnskykh pidpriemstvakh kharchovoi promyslovosti. Analiz vytrat i vyhod». – Rezhym dostupu: <http://www.ifc.org/Ukraine/FS>