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**IMPLEMENTATION OF A SAFETY AND QUALITY CONTROL SYSTEM
FOR SAUCE PRODUCTION**

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Introduction. Compliance with the quality of products in restaurant establishments with internal and international standards is a necessary condition that determines their competitiveness and directly affects the overall image.

Actuality of the theme. Organizing food services in restaurant establishments must comply with safety and food quality requirements [1-4]. Adherence to the principles of the HACCP system allows for the optimization of technological processes, reduces losses from the production of unsafe products by identifying non-compliance at early stages of production, and ensures the safety of products through traceability along the entire food chain [3, 5].

The quality of sauces is established during their development, ensured during

production, and maintained during storage and distribution by strict adherence to the requirements outlined in regulatory and technological documentation [6-7].

The research goal is to identify critical control points and corrective actions in the production of sauces in restaurant establishments.

Results and discussion. According to HACCP principles [1-5], an analysis of hazardous factors at each stage of sauce production in a pizzeria was conducted, which involved their identification and assessment (Table 1). Five critical control points (CCPs) were identified at the stages of raw material acceptance and sauce storage. CCPs are associated with hazardous biological and chemical factors.

Table 1

Critical Limits and Corrective Actions

CCP	Raw Material	Critical Limits	Corrective Actions
Stage of Procurement (CCP 1) and Raw Material Acceptance (CCP 2)			
1, 2	Beef, pork, and chicken bones, rendered animal fat, margarine	8 °C or lower (unless otherwise specified by legislation); packaging must be intact and undamaged; products must not be close to the expiration date at the time of delivery	Reject the product; supplier inspection; personnel training
1, 2	Fish	-12 °C or lower (unless otherwise specified by legislation); packaging must be intact and undamaged; products must not be close to the expiration date at the time of delivery	Reject the product; supplier inspection; personnel training
1, 2	Celery and parsley (root), carrots, onions, tomato puree	Raw food must be separated from ready-to-eat food during the entire delivery time; products must not be close to the expiration date at the time of delivery	Reject the product; supplier inspection; personnel training
1, 2	Salt, sugar, bay leaf, black peppercorns, citric acid, wheat flour	Packaging must be intact and undamaged; products must not be close to the expiration date at the time of delivery	Reject the product; supplier inspection; personnel training
Stage of Raw Material Storage (CCP 3)			
3	Beef, pork, and chicken bones, rendered animal fat, margarine	8 °C or lower (unless otherwise specified by legislation); packaging must be intact and undamaged; products must not exceed the expiration date; residues of cleaning/disinfecting agents	Re-temperature; consider if the products are safe for use; disposal of hazardous food products; personnel inspection and training
3	Fish	-12 °C or lower; packaging must be intact and undamaged; products must not be close to the expiration date; thawed when the core temperature reaches between 0 °C and 5 °C	Re-temperature; consider if the products are safe for use; disposal of hazardous food products; personnel inspection and training
3	Celery and parsley (root), carrots, onions, tomato puree	Products must not be close to the expiration date at the time of delivery	Personnel inspection and training

3	Salt, sugar, bay leaf, black peppercorns, citric acid, wheat flour	Packaging must be intact and undamaged; products must not be close to the expiration date at the time of delivery	Personnel inspection and training
Sauce Production Stages (CCP 4-5)			
4	Finished sauce	Core temperature of at least 85 °C (unless otherwise specified by legislation) for no more than 4 hours, or core temperature between 0 °C and 5 °C for no more than 3 days	Continue heating or cooling the sauce until the objective is achieved; consider if the product is safe for consumption; disposal of hazardous food products; personnel inspection and training
5	Finished sauce	Serve at a minimum core temperature of 63 °C; do not serve food that may be contaminated	Continue heating the sauce until the objective is achieved; consider if the product is safe for consumption; disposal of hazardous food products; personnel inspection and training

Based on safety and quality monitoring results for the main sauces, critical control points, critical limits, and corrective actions in case of their exceeding during the production and handling of main sauces in the pizzeria were established and developed.

Conclusions. Developing an HACCP system for a pizzeria ensures the analysis of hazards and control at all stages of sauce production in the establishment. Its implementation makes this process safe, and as a result, customers of the establishment gain confidence in the safety of dishes, contributing to an increase in trust in the establishment and raising its reputation. Consequently, the establishment gains a significant marketing advantage in the highly competitive restaurant business.

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