ASPECTS REGARDING THE INSURANCE OF THE FOOD QUALITY AND SAFETY AT THE LEVEL OF THE RESTAURANTS

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Abstract

The quality of the food products' quality and safety represents a consumers' right, which has direct effect on the life's quality and which is in the centre of the preoccupations of the global, European and national organisms for the defending of the consumers' interests. The quality of a food product can be synthetically shown through the formula4S: Health, Security, Safety and Satisfaction of the consumer's (Leonte, 2006). The insuring of the security and safety of the foods is one of the priorities of the speciality commissions which activates at the level of the European Union, especially from the recent years, when Europe confronted itself with the Mad cow disease, Chicken flu, Pig pest, the presence of Dioxin in several products etc.

In order to eliminate the product contamination and degradation risks, through the HG 1198/2002 have been approved the Hygiene norms regarding the production, working, depositing, keeping, transport and food opening, including the public food units.

*Moreover, the hygiene-health organization of the work spaces and of the technologic should respond to the requirements of the **HACCP** system – Hazard Analysis, Critical control points and/or **SAFE** – Systematic Assessment of Food Environment.*

Keywords: *foods, food safety, quality, alimentation, consumer.*

Introduction

When we talk about the quality of a food product, we talk of its nutritional value, with all its components (biologic value, energetic value, hygiene value, psychosenzorial value), about the way in which the product responds to all the consumers' requirements.

To constitute an essential link of the human with the surrounding environment and the base condition of its existence, the foods can act in the

direction of a normal behavior of the metabolism (material and energetic), or, it can disrupt if they don't respond to some well defined conditions, meant to insure the quality and security of the food and the human's alimentation. In conformity with the Human Rights Universal Declaration, adopted by the UN on the 10th of December 1948, an adequate alimentation, harmless, of high quality from the safety point of view, it is indispensable for a human to reach this acceptable level of life (Dima, 2004).
Presently, at a global level there are recorded numerous population informing and education actions regarding the foods' role, respectively of the alimentation, in insuring their health state.

Aspects regarding the quality and safety of the foods at global level

Currently, at international level there are functioning numerous institutes, organisms and organizations preoccupied with insuring the health state, respectively the consumers' protection. Among them there are the Alimentation and Agriculture Commission from the UN (FAO), as well as the Global Health Organization (OMS), which have acted and are acing with a lot of energy in the plan of numerous domains/aspects of the alimentation and health problem, as follows (Dima, 2004):

- The estimation of the food situation on global level, especially in undeveloped and in way to development countries are in development;
- The intensifying of the quality control actions of the foods;
- The insuring of the food safety;
- The lowering of the deficit in nutrients and supporting of the alimentation and of the mother nutrition, sugar and child;
- The development of the safety of the foods through the accentuation of its function of preventing illnesses and biologic contaminations, chemical or of other natures;
- The realizing of a balance between the environment, population and food offers;
- The realization of the concordance and compatibility of the national legislation with the international one, especially the norms/reglementations of the Codex Alimentarius;

The principles which stand at the base of the Aliment Law refer to:

- The insuring of the high level of protection of the public health and of the consumer's safety;
- The insuring of the free circulation of the internal market goods;
- The insuring of the competitiveness of the European food markets;
- The insuring of a coherent, rational, easily interpretable and applicable law, based on scientific fundaments and on the evaluation of risks;
- The establishment of the responsibilities regarding the insurance of the foods' safety at the level of the producers, respectively the suppliers, through the using of quality control systems specified in the standards elaborated by ISO, as well as through the applying of the HACCP, GHP, GNP etc. plans/guides.

In conformity with DS3027 E/2002 (Leonte, 2006), ***food safety*** *represent the insurance of the fact that the food does not affect the consumer if it s prepared and consumed in conformity with the indications.*

To establish if a food products hazardous to the consumers' health, there must be analyzed:

- The probable immediate/short term/long term effect of the products on the health of the respective consumer;
- The effects on the future generations;
- The cumulated toxic effects after a repeated consume or in the case of consuming of a larger quantity of the respective food;
- The sensibility of a category of consumers to certain substances/ingredients from the food.

The hygiene norms recommended by the Alimentarius Codex (Leonte, 2006) insures:

- The obtaining of foods without dangers regarding the consumers' health;
- The protection of the population's health;
- The creation of a theoretic base which guarantees the inocuity of the products in the hole food chain, from the first producer to the final consumer;
- The establishment of the principles of hygiene control in the whole food chain.

The main indicators of inocuity and safety of the foods is:

- ✓ The content of foreign organisms;
- ✓ The content of nitrogen and nitrogenous bodies;

- ✓ The content of heavy metals;
- ✓ The content of insoluble ash in the chlorhidric acid 10%;
- ✓ The lack of pathogen germs and their toxins;
- ✓ The presence under the risk limit of conventionally pathogen bacteria;
- ✓ The products' acidity;
- ✓ The water level reported to the dry substance;
- ✓ The fabrication recipe.

Particularities in the insurance of the quality and safety of the foods in the restaurants

In the case of food consumption in public alimentation units, indifferently of their category, it must regarded that serving quality and safe foods is not enough to supply ourselves with products – high quality raw materials, which responds to the hygiene and safety requirements; a very important contamination source of the products are the work conditions in the laboratories, the keeping-depositing conditions of the prime materials, as well as the serving methods of the foods to the consumers.

In the case of the public alimentation units, the fundamental rules regarding the hygiene presumes the excluding of any possibility of mixing of the raw materials' circuits which need washing-cleaning, of the washed-cleaned raw materials, half-prepared foods, prepared foods, product waste. These circuits must be separated in space and/or time. The succession of the phases through which the raw materials go through to reach the form of the prepared food in the clients' plate is established starting from the principle "*la marche en avant*" and presumes;

- ➢ ***The reception and depositing of the raw materials*** in corresponding depositing spaces;
- ➢ ***The production/preparing*** – must work in distinct prime working zones for meat, fish, vegetables and fruit, dews etc.. The kitchens of the large restaurants are organized in function of the size of the activity on parties/sections, more exactly: sauces; liquid foods; fish; barbeques; vegetables; cold appetizers; entrees; steaks; kitchen sweets; personnel meal etc.
- ➢ ***The distribution at the level of the restaurant's office*** – there must avoided the crossing of the prepared foods' circuits with those of the wastes resulted after cleaning;
- ➢ ***Serving***, respectively ***the prepared foods' consumption*** in the serving area.

Regarding the elimination of the contamination and degradation risks of the products, through HG 1198/2002 there have been approved *The hygiene norms regarding production, working, depositing, keeping, transport and unpacking of the foods, including the public alimentation units.*

Moreover, the hygiene-health organization of the work spaces and of the technological flux should respond to the requirements of the HACCP system – *Hazard Analysis. Critical Control Points* and/or SAFE – *Systematic Assessment of Food Environment.* If in the sector of food production, the implementing of the HACCP system has a compulsory character, in the case of the public alimentation units the applying of these systems is voluntary.

SAFE uses the HACCP principles, but in a way that permits their application in large public alimentation units, as well as in the small ones.

The systematic Assessment of Food Environment (SAFE) presumes the monitoring of three main areas in the foods' circuit:

- ✓ ***Cleaning*** – to avoid the foods' contamination;
- ✓ ***Boiling/baking*** – for destroying/stopping the development of bacteria through correct boiling/baking procedures, as well as procedures for maintaining the foods at different temperatures;
- ✓ ***The cooling/refrigeration*** – to stop the development of bacteria through correct fast cooling procedures or through the maintaining of the foods at specific low temperatures.

Through the applying of the SAFE system base principles are established regarding the security of the culinary dishes, of the food in general. Thus, the revising of the menus, of the kitchen (equipment), of the recipes and methods of preparing of the foods determines the making of an *Action plan*, which must be concentrated on, like HACCP, on the establishment and monitoring of the weak points, respectively critical from the technologic process.

The putting in practice of such an auto-control system presumes of some steps:

- ➢ ***Step 1. The taking of decisions to apply the SAFE system*** – consists of:
  - The putting in practice and, respectively, the taking of the decision to pursue the putting in practice of the system through ways which presume changes and minimal costs;
  - The training of the personnel for changing the mentality "it goes any way";

- The establishment of the critical points for pursuing the quality and safety of the products and prepared foods;
- The revising of the menus for identifying the foods which present a high risk for the consumers' health.

➢ ***Step 2. The identifying of the foods with a high risk thus making them traceable*** – refers to:

- the analyzing of the menus to isolate the products identified as presenting a high risk for consumption and their analysis; an accent will be put on the non-acid foods, succulent, with a high level of protein (meat, fish, sea fruit, eggs, milk and dairy products, sauces and meat sauce, prepared cereal). Some of these half-prepared/prepared foods need a special attention, for example:
  - the chicken meat presents a higher risk than red meat, being predisposed to Salmonella contamination;
  - hamburgers, meat balls, dishes which have crushed meat, bones and/or cartilages need a more thorough control than the ones with ribs, muscles or pulp, because they can easily get an internal contamination, not only one at the surface;
  - the dishes based on sea fruits (oysters, snails etc.) are predisposed to virotic contamination;
- the monitoring of the preparation procedures can amplify the risk of contamination, examples:
  - culinary dishes prepared in large quantities need a longer time for boiling/baking, cooling etc., which increases the chance of microbiologic contamination;
  - the foods prepared a long time before the serving moment can be contaminated in the keeping period; it is recommended that, where possible, the preparing is made after receiving the order from the consumer, not before;
  - it must be avoided (most of the times it is forbidden) the repeated heating/cooling of the dishes – for most of the dishes, the risk zone is between 15°C and 65°C;
  - the complex preparing procedures and the lengthened work period can amplify the risk factors.

➢ ***Step 3. The identifying of all the stages of the preparing process, from the delivery-receiving of the products - raw materials to the dishes' serving***

In the purpose of monitoring the semi-prepared/prepared foods through their creation, these can be grouped based on specific characteristics, on the preparing mode (products from these "groups" present a similar risk, need similar control measures).

- ***Step 4. The identifying of the potential risks at each preparing stage of the foods*** – it must be kept in view that:
  - Semi-prepared foods can be contaminated:
    - Through direct contact with contaminated foods;
    - Through contact with work surfaces, work equipment, tools etc.;
    - Through contact with the hands or the personal objects of the personnel from the kitchen, waiters etc.;
    - Through the contact with flies, other bugs, mice, parasites etc.;
    - From cleaning, bug removing, disinfection substances used in an bad manner;
  - Microorganisms can develop as result from disrespecting the keeping conditions until the serving moment (long time, incorrect temperatures). It is recommended that the cooling of the products, where the case, should be made as fast as possible;
  - There are certain microorganisms which are not destroyed at high temperatures specific to the baking/boiling processes; these microorganisms can become active as result of the heating/re-heating process of the foods;
- ***Step 5. The establishment of the control points and the effective control*** – is considered as being the most important step in the monitoring process of the semi-prepared and prepared culinary dishes. The control points are established at each preparing stage. In parallel with this action there is carried out a current quality control of the products-prime materials, semi-prepared and prepared dishes, the control of the carrying out of the preparation operations, keeping-depositing etc.
- ***Step 6. The establishment of the ACTION PLAN*** – presumes the converting of the critical control points identified in the *action plans/control lists* in the purpose of making a good SAFE estimation for all the obtained dishes, respectively the ones served in a public alimentation unit. Any *Action plan* must contain/respond to the following questions:
  - *What should be verified/controlled?*

- *When?* – the frequency of the control;
- *Which are the expected targets/results?*
- *The fact state?* – the place where the results are recorded;
- *How do you act? What measures did you take in the case in which the reality does not correspond with the targets?*
- *The signature of the one who makes the control.*

Starting from the mentioned above, in the frame of a restaurant/public alimentation unit with a relatively small number of serving locations, *Control lists* can be made for:

- ✓ Received goods – the reception is made at quantity and quality-organoleptic level;
- ✓ The following of the parameters from the keeping chambers (deposits, frigorific rooms);
- ✓ All the stages of the culinary production;
- ✓ The way and serving type in the serving area.

The complex units, with a large activity volume, must make, aside from the control lists mentioned above, actions plans for:

- ✓ The cooling stage of the foods;
- ✓ Cold keeping;
- ✓ Re-heating operations;
- ✓ The monitoring of the temperature while working the prepared/half-prepared dishes.

Generally, these criteria are applied for all the products/half-prepared/prepared foods which are manipulated in the kitchen laboratory of a public alimentation unit. It cannot be practically effectuated, but it is not necessary, to monitor the kitchen's hygiene, of the keeping/depositing spaces, respectively of the personnel, for each stage/operation, for each dish; it is enough to execute a poll verification of these control points, to monitor the cleaning, disinfection (for walls, floors, work surfaces, dishes, tools, devices etc.) operations effectuation graphics.

Other general verifications will include a control of the fridges and freezers, of the frigorific rooms and of the keeping-depositing spaces (the keeping temperature, as well as the cleanliness and hygiene states, the functioning conditions are monitored).

- ➢ ***Step 7. The elaboration of the documentation regarding the procedures and records corresponding to the applying of the SAFE principles.***

At the level of the public alimentation unit, in insuring the uniformity of the production and of a constant quality level, an important role is played by the elaboration and respectively the control of respecting the *dish technical files*. This procedure, similar to that from the alimentary industry and specially applied to the large restaurants and at the level of the restaurant chains, permits the quick and precise establishment of the necessary prime material quantity, which is of great help in the supply and stock manipulation activity.

Conclusions

The norms, reglementations/directive elaborated at an international level have been adopted by the specialty organisms in our country and transposed in the economic practice in all the agro-alimentary sectors.

The implementing of the HACCP system in the case of the public alimentation units is voluntary, as in the case of SAFE; these systems are applied for auto-control, for obtaining and serving of high quality culinary dishes.

SAFE uses the HACCP principles, but in a way which permits their applying in the large public alimentation units, but in the small ones too.

References

Bratu I. (2002) – *Asigurarea calitatii si sigurantei produselor alimentare,* Editura Universitatii "Lucian Blaga" Sibiu

Dima D., Pamfilie R., Procopie R., Paunescu C. (2004) – *Merceologia si expertiza marfurilor alimentare de export-import,* Editura ASE Bucuresti

Leonte M. (2006) – *Cerinte de igiena-HACCP si de calitate-ISO 9001 :2000 in unitatile de industrie alimentara conform normelor Uniunii Europene,* Editura Millenium, Piatra Neamt

xxx – *Directiva 93-43 CEE din 14 iunie 1993 privind igiena produselor alimentare (directiva de baza)*

xxx – HG nr. 1198/2002 privind aprobarea Normelor de igiena a produselor alimentare.