THE IMPORTANCE OF FOOD SAFETY FOR CONSUMERS

- Facts about food safety
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- European Union at work to further protect consumer's health
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CONSUMERS UPDATES
SAFFI facts and briefing sheet n.1 (April 2022)

SAFFI
Safe Food for Infants in the EU and China

FACTS:

Despite the declining presence of biological, physical, and chemical hazards in infant food due to national and international control programs, the risks of hazards in infant food are still a global concern. During recent years, raising consumer's awareness on the consequences of unhealthy food consumption, and a growth of consciousness by food industry of the importance of ensuring protection against contaminants in commercially available products, contributed to limit the danger of food contaminants. However, interventions applied across the food supply chain, to inspect the presence of food contaminants and to help ensuring a sustainable supply of safe, nutritious food, appears to be still insufficient to provide an extensive and comprehensive protection. Infant food safety in the economically advanced western world is currently monitored by increasingly stricter legal regulations, however some countries still use banned substances in industrial food production due to their poor economy and insufficient regulatory laws. The export of commercial, often low cost, infant food products to other countries, my raise serious risks for children's health. This, despite the presence of standard control procedures and techniques, which may prove to be insufficient or inadequate to effectively detect a large variety of old and new contaminants in food products.

Be aware of biological, chemical or physical hazards in food.

Biological, chemical, or physical hazards may be introduced into the food supply any time during harvesting, processing, transporting, preparing, storing and serving food. Understanding the risks associated with each can significantly reduce the potential of foodborne illnesses. Each have their own unique characteristics, but all can be avoided through an effective food safety management system.

Biological hazard occurs when food becomes contaminated by microorganisms. Many of them microorganisms are helpful and necessary for life itself, however, if facilitated by the right conditions, some may cause a foodborne condition. Therefore, foodborne diseases can be caused by consuming food or water contaminated by pathogenic microorganisms, which include bacteria and their toxins, fungi, viruses, and parasites. Food can be contaminated both at the source as raw material, and during food processing up to storage and distribution. Infected individuals or carriers of pathogens and the environment, through food contact surfaces and facilities, can spread microorganisms on raw or processed food.

Hazards caused by chemicals may take place at any stage during harvesting, storage and food preparation and service. Food contaminants include environmental contaminants, food processing contaminants, unapproved adulterants, food additives and migrants from packaging materials. Typically, chemicals used for pest control or for cleaning and sanitizing food contact surfaces and food preparation equipment may contaminate food. Persistent organic pollutants (POPs) are a most common and dangerous group of chemical contaminants that persist in the environment, bioaccumulate through the food web, and pose a risk of causing adverse effects to human health and the environment.

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Common sources of physical hazards in food

Glass	Light bulbs, glass containers and glass food containers
Metal	Fragments from equipment such as splinters, blades, needles, utensils, staples, etc
Plastic	Material used for packaging, fragments of utensils used for cleaning equipment
Stones	Incorporated in field crops, such as peas and beans, during harvesting
Wood	Splinters from wood structures and wooden pallets used to store or transport ingredients or food products
Natural components of food	Hard or sharp parts of a food (eg, shells in nut products)
Metallic contaminants	Natural and anthropogenic sources of heavy metal contamination include agricultural activities, such as pesticide and herbicide application, contaminated irrigation water, municipal waste used for fertilization and mineral fertilizer containing traces of heavy metals

Table 1

Physical hazards may include a variety of extraneous materials in foodstuffs that are hazardous to individuals, causing illness or injury. Foreign items can be unintentionally introduced to food products, or naturally occurring objects may fail to be separated along a food processing line and excluded from consumption (Table1). There is a long list of materials normally absent in food products, which include but not limited to metal fragments in ground meat, bone chips, pieces of product packaging, stones, glass or wood fragments, insects or other filth and personal items. Furthermore, many different types of metals and metal compounds exist in nature and individuals are exposed to them as environmental pollutants from industrial or other human activities. Therefore, any kind of metal, particularly heavy metals such as lead, arsenic, mercury, or cadmium, may be considered a potential metallic contaminant. These types of contaminations are of concern in food due to their toxicity, particularly in the case of a long term intake, as they may accumulate in the body and cause organ damage especially to susceptible groups including young children.

European Union at work to further protect consumer's health.

European Union rules and regulations are efficient and carefully applied on food provided to consumers, including infant food. However, the EU is further engaged in protecting consumer's health. To this regard, improving risk assessment and monitoring of food safety, including the use of big data, is of major importance. To ensure effective control programs is essential to plan integrated approaches along the entire food chain for detecting, assessing, and mitigating relevant pathogens and other contaminant hazards.

Recently the EU has funded a consortium of 19 European research centers, coordinated by the French National Research Institute for Agriculture, Food and the Environment, which has developed a research program called safe food for infants (SAFFI). Supported by the European Union (EU)[1] this EU-funded project covers the infant food chain from primary production, towards consumer use, and aims at improving risk-based food safety management of biohazards. To achieve these goals the consortium is developing procedures to enhance top-down and bottom-up hazard control by combining management options within the frame of the EU Horizon 2020 research and innovation program. In view of the food safety challenges in monitoring and detecting contamination in food supplies, whether by accident or fraud, the consortium is developing new decision support systems to enhance safety controls along the food chain. Focusing on the potential risks raised by the major international channels of infant food trade, the program is also establishing educational and knowledge transfer activities to foster harmonization of good practices. Global collaboration in food safety and control is of great strategic importance, and the EU program includes the cooperation with the public health authorities of governments around the world.

Where consumers can find information about the SAFFI project and its progresses

The SAFFI consortium has developed a website where the consumers can fine relevant information about the project and its progresses. The link to the website is: https://www.saffi.eu/

Consumers can also find information by using the mobile phones:

SAFFI: THE SINO-EUROPEAN CONSORTIUM PARTNER CENTERS

Coordination: French National Research Institute for Agriculture, Food and Environment (INRAE),

- Five international infant food companies (Friesland Campina, HiPP, YIOTIS, Beingmate, YFFC)
- Two food safety authority institutions (ZAIQ and ANSES)
- Three European technological SMEs (CremeGlobal, Computomics, BDS)
- The Union of 49 National European Societies of Pediatric (EPA-UNEPSA)
- Seven leading European and Chinese academic institutions (WU, UNITO, IRTA, IVV; ZJU, ZAAS, JAAS)

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