



# Food Safety: Cross Contamination of Food



Food Safety refers to handling, preparing and storing food in a way to best reduce the risk of individuals becoming sick from foodborne illnesses. This includes a number of routines that should be followed to avoid potential health hazards. The principles of food safety aim to prevent food from becoming contaminated thus causing food poisoning to the consumers.

In this weekly article, we examine food safety aspects of food that is consumed on a daily basis and the risks posed by cross contamination and where BAF's intervention required to safe guard, regulate, inspect and certify food for export.

Food safety include the origins of food, the practices relating to food labeling, food hygiene, food additives and pesticide residues, as well as policies on biotechnology, food and guidelines for the management of import and export inspection and certification systems for foods by National Regulatory Bodies.

ISO 22000 is a standard developed by the International Organization for Standardization dealing with food safety. This is a general derivative of ISO 9000. ISO 22000 standard: The ISO 22000 international standard specifies the requirements for a food safety management system that involves interactive communication, system management, prerequisite programs and HACCP principles.

Regardless of the reason you are handling food, whether it is part of your job or cooking at home for family, it is essential to always apply the proper food safety/hygiene principles. A number of potential food hazards exist in a food handling environment, many of which carry with them serious consequences. A major concern for food safety is cross contamination of food on industrial scale as well as at homes.

Cross contamination occurs when the bacteria from raw foods, utensils or from surfaces are transferred to prepared and cooked foods. There are thousands of types of bacteria in the environment, of which majority of them are not harmful. For example, there are some types of bacteria that are beneficial and keep human/animal or livestock digestive tract healthy. When harmful bacteria, also known as pathogens, enter food and water supply, they can cause food borne illness and even death. Spoilage bacteria can cause foods to smell and taste bad. These bacteria can be harmful, but probably will not cause illness. Disease-causing bacteria are more serious because they usually do not make the food foul smelling or taste bad, but they can cause illness to humans and as well as animals/livestock's.

Contamination refers to food that has been corrupted with another substance, which includes physical, biological or chemical contamination.

## Biological Contamination

Biological contamination refers to food that is contaminated by organisms or substances they produce. This includes biological matter produced by humans, rodents, insects and microorganisms.

Bacteria and viruses are typically the two biggest causes of biological contamination and can result in some of the most common types of food poisoning including salmonella, E.coli, listeria and norovirus. Thoroughly washing your hands and sanitising the food handling equipment are two of the best ways to prevent against bacterial contamination.

## Physical Contamination

Physical contamination is when a foreign object contaminates food. This can happen at any stage of the production process and could include Band-Aids, steel wool or pieces of plastic. Physical contamination can cause injury to an individual who inadvertently consumes the foreign object. The added risk associated with physical contamination is that the foreign object could be carrying biological contamination.

## Chemical Contamination

Chemical contamination refers to food that has been contaminated with a natural or artificial chemical substance. These contaminants are particularly dangerous as they expose people to any number of toxic substances, some of which can be fatal.

Chemicals can also contaminate food at any time during food processing, whether by pesticides transferred from the soil the food is grown in or during the manufacturing process. Storing chemicals separately from food is essential to help protect against chemical contamination.

The most common household-level problems that result in contamination of food with pathogenic microorganisms include:

- storage of cooked food at ambient/room temperature for an extended period
- inadequate reheating of food in terms of temperature and/or time
- contamination with pathogens from hands
- use of raw food products with a high level of pathogens
- contamination of pathogens from utensils,
- use of water with high levels of pathogens,
- Inadequate initial cooking of food.

The critical actions necessary to decrease the risk of foodborne contamination at the household level included:

- thorough initial cooking and reheating of food, in terms of both temperature and time
- decreasing the time cooked food is stored at ambient/room temperature
- adequate hand washing before and during food preparation and before eating
- Adequate washing of utensils.

The critical actions necessary to decrease the risk of foodborne contamination at Industrial production level included

- Properly cleaning and sanitising all surfaces, equipment and utensils
- Maintaining a high level of personal hygiene, especially hand-washing
- Storing, chilling and heating food correctly with regards to temperature, environment and equipment
- Implementing effective pest control
- Comprehending food allergies, food poisoning and food intolerance

BAF conducts regular inspection of all animal product processing plant, such as sausage, chicken, mayonnaise, yoghurt, ice cream, canned mutton/beef, tuna and egg production for export to ensure food is prepared and packed in safe environment fit for human consumption, Which meets food safety requirement. The aspects inspected in these processing plants are the production processing line, packaging, store, order of distribution, hygiene, sanitization and cleaning, training of employees, traceability of finish product and waste disposal.

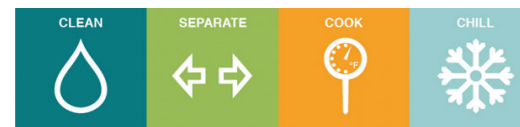
Production Facilities which do not meet inspection requirement are given time frame for improvement before certification of compliance is provided.

BAF endeavors to safe guard import and export of food and food products by setting standards to mitigate risks associated with the movement of these products and to prevent spread of disease/pest and enable safe international trade.

(Various Source)



(Source: <http://extension.wsu.edu/benton-franklin/health/foodsafety>)



(Source: <https://www.clark.wa.gov/public-health/food-safety>)



(Source: <http://www.foodsafetynews.com>)

## BAF IMPORT REQUIREMENTS FOR IMPORTING MICROORGANISMS INTO FIJI

### Viable microorganisms that can be imported into Fiji:

- Protozoa
- Fungi
- Bacteria
- Viruses ( Vaccines)
- Unicellular algae.

### Products containing microorganisms can be imported for:

- The isolation and enrichment of microorganisms, for example meat or dairy samples for food safety
- Laboratory research, diagnostic and analytical purposes (including equipment calibration and method validation)
- Environmental use like bio-insecticides

- mportation of bio-remedial products (e.g. : biodegrading enzymes, biological cleaners, biological controls, industrial waste cleaners, microbial products for environmental use,

- Probiotics & Starter cultures for yoghurt and cheese production
- Veterinary medicines and supplements.

### Guidelines for Import of Microorganisms

- Provide a list of Microorganisms intended to be imported to Biosecurity Authority of Fiji (BAF)
- Verification of the list on Microorganisms by BAF Microbiologist & Chief Veterinary Officer
- Formal letter written stating the use, storage and disposal of Microbial sample.

- Application for a permit before consignment arrives in Fiji.

- Fees and chargers

### Document Requirements

- The consignment must identify the starter culture, end use and carrier

To demonstrate compliance with this requirement you must present the following on a Manufacturer's declaration:

- The product description (e.g. live starter culture, enzyme etc.)
- A detailed description of the microorganism/ starter culture (genus and species).
- A written declaration indicating that the microorganism is not considered to be pathogenic for livestock or poultry.

## For Further Information Please Contact:

Biosecurity Authority of Fiji  
on 3312512 or  
Short Codes:  
General Enquiries - 5994,  
Termites - 5996, Giant Invasive Iguana (GII) - 5995,  
Animal Disease Surveillance - 5997  
or email [info@baf.com.fj](mailto:info@baf.com.fj),  
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