

BHUTAN GENERAL STANDARD FOR FOOD HYGIENE

1. PREAMBLE

This standard is promulgated under the Food Rules and Regulations of Bhutan 2007. This standard is based on the Recommended International Code of Practice- General Principles of Food Hygiene (CAC/RCP 1-1969) established by the Codex Alimentarius Commission.

2. SCOPE

This standard deals with food hygiene requirements from primary production till consumption and sets out the necessary hygiene conditions for producing food that is safe and suitable for human consumption.

3. DEFINITIONS

3.1 **Food Hygiene:** all conditions and measures necessary to ensure the safety and suitability of food at all stages of the food chain.

3.2 **Hazard:** a biological, chemical or physical agent in, or condition of, food with potential to cause an adverse health effect.

3.3 **Food handler:** any person who directly handles packaged or unpackaged food, food equipment and utensils, or food contact surfaces.

3.4 **Cleaning:** the removal of soil, dirt, food residue or other objectionable material.

3.5 **Contaminant:** any biological or chemical agent, foreign matter or other substances not intentionally added to food that may compromise food safety or suitability

3.6 **HACCP:** Hazard Analysis Critical Control Point

4. FOOD HYGIENE AT THE PRIMARY LEVEL

4.1. Environmental Hygiene

Potential sources of contamination from environment should be considered and primary food production should not be carried out in areas where the presence of potentially harmful substances would lead to unacceptable level of such substances in food.

Primary producers should control contamination from air, soil, water, feedstuffs, fertilizers, pesticides and veterinary drugs or other substances used in primary production:

- a. Control contamination from air, soil, water, feedstuffs, fertilizers, pesticides and veterinary drugs or other substances used in primary production
- b. Control plant and animal health so that it does not pose a threat to human health through food consumption
- c. Protect food sources from fecal and other contamination

4.2. Handling, storage and transport

Procedures should be in place at all stages of the food chain (producers, processing and retail food establishments) to ensure the safety of food during handling, storage and transport. Specifically procedures should be in place to:

- a. Sort food and food ingredients and prevent contamination with material unfit for human consumption
- b. Dispose of any rejected material in a safe and hygienic manner
- c. Protect food and food ingredients from contamination by pests or by chemical physical or microbiological contamination during handling, storage and transportation

5. LOCATION OF FOOD PREMISES

Potential sources of contamination should be considered when deciding where to locate food establishments. Food establishments should be located away from areas that may be:

- a. Environmentally polluted
- b. Prone to flooding and other hazards that may affect food safety
- c. Prone to infestation of pests

6. EQUIPMENT

Equipment used in food production should be located so that it:

- a. Permits adequate maintenance and cleaning
- b. Functions according to intended use
- c. Enables good hygiene practices and maintenance

7. DESIGN OF FOOD PREMISES AND ESTABLISHMENTS

Where appropriate, the internal design and layout of food establishments should permit good food hygiene practices including protection against cross contamination during operations.

8. INTERNAL STRUCTURES AND FITTINGS

Structures within food establishments should be soundly built of durable materials and be easy to maintain clean and where appropriate able to be disinfected. Specific requirements are:

- a. The surfaces of walls, partitions and floors should be made of impervious materials with no toxic effects in intended use
- b. Walls and partitions should have a smooth surface upto a height appropriate to the operation
- c. Floors should be constructed to allow adequate drainage and cleaning
- d. Ceilings and overhead fixtures should be constructed to minimize the buildup of dirt and where necessary be fitted with removable and cleanable insect proof screens. Windows should be fixed where necessary
- e. Doors should have smooth, nonabsorbent surfaces and be easy to clean and where necessary disinfect
- f. Working surfaces that come into direct contact with food should be made of smooth and nonabsorbent materials and should be in sound condition

9. FACILITIES

9.1 Water supply

There should be adequate supply of potable water or water from municipal supply, with appropriate facilities for its storage, distribution and temperature control to ensure the safety of food.

9.2 Drainage and waste disposal

Facilities should be in place to facilitate drainage and safe disposal of waste material. These facilities should be designed and constructed in such a way as to minimize the risk of contamination of food or potable water supply.

9.3 Cleaning

Adequate facilities should be in place for cleaning food, utensils and equipment used in food production, processing and preparation and storage. Where appropriate such facilities should have adequate supply of hot and cold potable water.

9.4 Personal hygiene facilities and toilets

Personal hygiene facilities such as wash basins (with adequate supply of hot and cold water) toilets (of appropriate hygiene and design) should be in place. Where appropriate changing facilities should be provided.

9.5 Temperature control

Depending on the nature of food operations undertaken, adequate facilities should be available for heating, cooling, refrigerating and freezing food for storing refrigerated or frozen foods, monitoring food temperatures and when necessary, controlling ambient temperatures to ensure the safety and suitability of food.

9.6 Air quality and ventilation

Adequate natural or mechanical ventilation should be provided to minimize air borne contamination.

9.7 Lighting

Adequate natural or artificial lighting should be provided to enable the food establishment to operate in a hygienic manner.

9.8 Storage

Adequate storage facilities should be provided for storage of food and food ingredients. Nonfood items such as chemicals and detergents should be preferably stored in separate premises to prevent contamination with food.

10. OPERATIONAL CONTROLS

10.1. Control of food hazards

Food businesses should control food hazards through the use of systems such as HACCP. Specifically they should:

- a. Identify any steps in their operations that are critical to the safety of food
- b. Implement effective control procedures at those steps
- c. Monitor control procedures to ensure their continuing effectiveness
- d. Review control procedures periodically and whenever operations change

Where necessary food establishments may be required to apply systems such as HACCP to control hazards.

10.2. Key elements of food hygiene control systems

Systems should be in place so that temperature is controlled effectively where it is critical to the safety and suitability of food. Temperature control systems should take into account:

- a. The nature of the food
- b. Intended shelf life of the product
- c. Method of packaging and processing
- d. How the product is intended to be used

10.3. Microbiological cross contamination

Adequate measures should be in place to prevent microbiological cross contamination. Raw unprocessed food should be separated either physically or by time, from ready to eat foods.

Access to processing areas may need to be restricted or controlled. Surfaces, utensils and equipment and fixtures and fittings should be thoroughly cleaned and where necessary, disinfected after raw food, particularly meat and poultry has been handled and processed.

10.4. Physical and chemical contamination

Systems should be in place to prevent contamination of foods by foreign matter (e.g. glass, metal pieces or dust) where appropriate; systems should be in place to facilitate detection of such materials.

10.5. Establishment maintenance and sanitation

Establishment and equipment related to production, processing, storage and handling of food should be maintained to:

- a. Facilitate all sanitation procedures
- b. Function as intended
- c. Prevent contamination of food

Cleaning and disinfection programmes should be in place to ensure that all parts of the establishment are appropriately clean.

11. WASTE MANAGEMENT

Suitable provisions should be in place for removal and storage of waste.

12. ILLNESS AND INJURY

Persons known or suspected to be suffering from, or to be a carrier of, a disease or illness likely to be transmitted through food should not be allowed to enter a food handling area if there is a likelihood of contaminating food.

Persons who have cuts and lesions or other injuries should not be permitted to handle food if these injuries are likely to result in contamination of food.

13. PERSONAL CLEANLINESS AND BEHAVIOR

Food handlers should maintain a high degree of personal cleanliness and where appropriate wear suitable clothing, protective head covering and footwear.

All food handlers working in food preparation/processing areas should always wash their hands:

- a. At the start of food handling activities
- b. Immediately after using the toilet
- c. After handling raw food or any contaminated material where this could result in cross contamination.

Persons engaged in food handling activities should refrain from:

- a. Smoking
- b. Spitting
- c. Chewing or eating
- d. Sneezing or coughing over unprotected food

Personal effects such as watches, jewelry or other items should not be worn during food handling operations if they pose a threat to the safety and suitability of food.

14. VISITORS

Visitors to food manufacturing, processing and handling areas should, where appropriate, wear protective clothing and adhere to the other personal hygiene provisions in this section of the standard.

15. TRANSPORTATION

Food must be adequately protected during transport. The types of transport, equipment and containers used should be determined taking into account the nature of the food and the conditions under which it has to be transported.

16. TRAINING

All personnel in food establishments should be provided with appropriate training. Where necessary training programmes should be reviewed and updated to ensure that all personnel are aware of all procedures necessary to maintain the safety and suitability of food.