



FOOD SAFETY AND STANDARDS  
AUTHORITY OF INDIA

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*fssai* FOOD SAFETY AND STANDARDS  
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## TRAINING MANUAL

### FOOD SAFETY SUPERVISOR ADVANCE (LEVEL 2) :

### RETAIL & DISTRIBUTION



Safe & Nutritious Food  
A Shared Responsibility  
[www.snfportal.in](http://www.snfportal.in)

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## WELCOME TO THE MANUAL

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This handbook / manual is designed for small, medium and large scale food retailers and food service establishments.

This handbook / manual explain basic requirements on food safety and hygiene to be followed by all Food Business Operators being food retailers and food service establishments, in consonance with the Act (defined below).

## LEARNING THE OUTCOME

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The objective of this handbook / manual is to train personnel, who can become Food Safety Supervisors in food retail and food service establishments, about food safety and hygiene requirements which are to be followed in their businesses. These requirements can be adopted and applied in practice according to the size and type of the respective establishment. The desired learning outcome of this handbook / manual is better understanding of food safety and hygiene requirements and high standards of food safety in the food industry.

## WHAT THE LAW SAYS

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The establishment in which food is handled, processed and packed, by the food business operator and the persons handling them should conform to the sanitary and hygienic requirement, food safety measures and other standards as specified below. It shall also be deemed to be the responsibility of the food business operator to ensure adherence to necessary requirements.

In addition to the requirements specified below, the food business operator shall identify steps in the activities of Food businesses, which are critical to ensure food safety, and ensure that safety procedures are identified, implemented, Maintained and reviewed periodically

In India, the mandatory sanitary and hygiene requirements for food business operators are – “Part II and Part V of Schedule 4” of Food Safety and Standards (Licensing & Registration of Food Businesses) Regulations, 2011 (<http://www.fssai.gov.in/home/fss-legislation/fss-regulations.html>) under Food Safety & Standard Act, 2006 (<http://www.fssai.gov.in/home/fss-legislation/food-safety-and-standards-act.html>)

## DEFINITIONS

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(TAKEN FROM THE ACT MENTIONED BELOW)

“**Act**” means the Food Safety and Standards Act, 2006

“**Rules**” means the Food Safety and Standards Rules, 2011.

**“Adulterant”** means any material which is or could be employed for making the food unsafe or sub-standard or misbranded or containing extraneous matter.

**“Consumer”** means persons and families purchasing and receiving food in order to meet their personal needs.

**“Contaminant”** means any substance, whether or not added to food, but which is present in such food as a result of the production (including operations carried out in crop husbandry, animal husbandry or veterinary medicine), manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food or as a result of environmental contamination and does not include insect fragments, rodent hairs and other extraneous matter;

**“Food”** means any substance, whether processed, partially processed or unprocessed, which is intended for human consumption and includes primary food to the extent defined in clause (zk) genetically modified or engineered food or food containing such ingredients, infant food, packaged drinking water, alcoholic drink, chewing gum, and any substance, including water used into the food during its manufacture, preparation or treatment but does not include any animal feed, live animals unless they are prepared or processed for placing on the market for human consumption, plants, prior to harvesting, drugs and medicinal products, cosmetics, narcotic or psychotropic substances :

**“Food Authority”** means the Food Safety and Standards Authority of India established under section 4;

**“Food business”** means any undertaking, whether for profit or not and whether public or private, carrying out any of the activities related to any stage of manufacture, processing, packaging, storage, transportation, distribution of food, import and includes food services, catering services, sale of food or food ingredients;

**“Food business operator”** (or **“FBO”**) in relation to food business means a person by whom the business is carried on or owned and is responsible for ensuring the compliance of this Act, rules and regulations made thereunder;

**“Hazard”** means a biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect;

**“Food safety”** means assurance that food is acceptable for human consumption according to its intended use;

**“Food safety audit”** means a systematic and functionally independent examination of food safety measures adopted by manufacturing units to determine whether such measures and related results meet with objectives of food safety and the claims made in that behalf;

**“Food Safety Management System (FSMS)”** means the adoption Good Manufacturing Practices, Good Hygienic Practices, Hazard Analysis and Critical Control Point and such other practices as may be specified by regulation, for the food business;



## FOOD SAFETY & FOOD SAFETY HAZARDS

### BASICS IN RELATION TO CERTAIN HAZARDS

**Food Safety Hazard** means biological, chemical or physical agent in food, or condition of food, with the potential to cause an adverse health effect. There are three types of hazards -



### 1. PHYSICAL HAZARDS

Any foreign object (inanimate) found in the food or a naturally occurring object (metal, hard plastic), that poses a hazard is called a 'Physical Contamination or Hazard'.

#### Common Physical Hazards include :

- Glass
- Chipped pieces from equipment
- Metal shavings from cans and foils
- Stapler pins
- Blades
- Plastic or chipped pieces of disposables
- Lint and threads
- Band-aids
- Hair
- Finger nails
- Jewellery pieces

### 2. CHEMICAL HAZARDS

Naturally occurring and process induced chemical substances that can cause a food borne illness are called a 'Chemical Contaminant or Hazard'.

#### Natural Chemical Contaminants include :

- Allergens
- Mycotoxins

## PART I

# INTRODUCTION TO FOOD SAFETY

- Food safety & food safety hazards
- Allergens
- Food spoilage

**Process Induced Chemical Contaminants include :**

- Toxic metals in the processing set up or supply chain
- Pesticides, Colorants
- Cleansing products and sanitizers
- Equipment lubricants
- Chemical Food Additives, Preservatives
- Packaging materials-migration of residues from packaging material to oil.
- Adulteration with other oils or mineral oil

**3. BIOLOGICAL HAZARDS**

Biological hazards are organisms, or substances produced by organisms, that pose a threat to human health. They are a major concern in food processing because they cause most food borne illness outbreaks.

**Major biological hazards include :**

- Bacteria ex: Salmonella spp., Enterohaemorrhagic Escherichia coli, Listeria monocytogenes, Staphylococcus aureus, Clostridium botulinum,
- Yeast and Mold ex: Candida, Aspergillus sp, Helicosporium
- Biological creatures like flies, worms, cockroaches weevils, caterpillars and so on, whether in live or dead form.

**Biological Hazards cause :**

**1. Food Borne Infections** – This result when a person consumes food containing pathogens; which grow in the human intestine and cause discomfort or disease. Typical symptoms of a 'food borne Infections' do not appear immediately.

**2. Food Borne Intoxications** - This result when a person consumes food containing toxins in it; that cause discomfort or disease. Typical symptoms of a 'food borne Intoxication' appear quickly. Food Borne intoxications are mediated infections, that is, infections which result when a person consumes food containing toxins produced by the pathogens in it; which grow in the human intestine and produce toxins that cause discomfort or disease.

**Conditions favouring growth of Microorganisms - FATTOM****F****FOOD**

Food borne Microorganisms draw nutrients from Potentially hazardous foods

**A****ACIDITY**

Food borne Microorganisms grow well between the pH range of most foods

**T****TEMPERATURE**

Microorganisms grow well between the temperature range of 5°C – 60°C, most commonly known as the 'Danger Zone'.

**T****TIME**

Microorganisms need sufficient time to grow; when exposed to the 'Danger Zone'.

**O****OXYGEN**

Microorganisms require oxygen in free or combined state; to favor their growth.

**M****MOISTURE**

Microorganisms require moisture to grow and is measured in the form of 'Water Activity (Aw)'.

## ALLERGENS

An **allergen** is normally, any harmless substance that causes an immediate allergic reaction in a susceptible person. Food allergens are almost always proteins although other food constituents, such as certain additives, are known to have allergenic (allergy-causing) properties.

**Food allergy** is a potentially serious immune response to eating or otherwise coming into contact with certain foods or food additives.

A food allergy occurs when the immune system :

- Identifies a particular food protein as dangerous and creates antibodies against it
- The next time the individual eats that food, immune system tries to protect the body against the danger by releasing massive amount of chemicals including Histamine
- Histamine is a powerful chemical that can cause a reaction in the respiratory system, gastrointestinal tract, skin or cardiovascular system.
- In the most extreme cases, food allergies can be fatal. Although any food can provoke an immune response in allergic individuals, a few foods are responsible for the majority of food allergies.

**The following foods and ingredients are known to cause hypersensitivity and shall always be declared :**

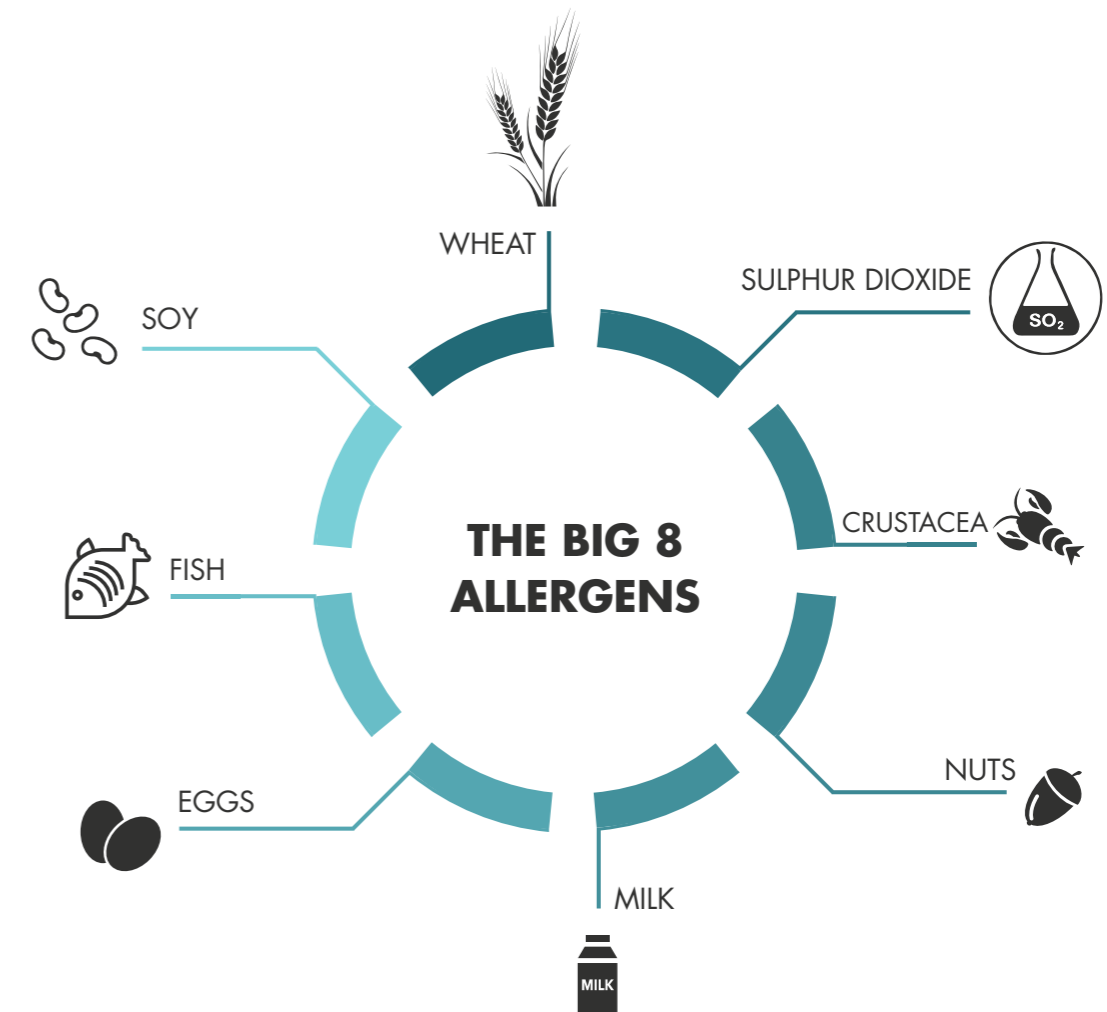
1. Cereals containing gluten; i.e., wheat, rye, barley, oats, spelt or their hybridized strains and products of these;
2. Crustacean and products of these;
3. Eggs and egg products;
4. Fish and fish products;
5. Peanuts, soybeans and products of these;
6. Milk and milk products (lactose included);
7. Tree nuts and nut products; and
8. Sulphite in concentrations of 10 mg/kg or more."

Source: <http://www.foodallergens.info/Legal/CODEX.html>

### HANDLING ALLERGENS

#### 1. Raw Material -

- a. Review the labels of incoming raw materials for the appropriate allergen information or any changes.
- b. Tag each case/pallet/bag, etc. as appropriate of raw materials to ensure the allergen



- c. is clearly called out as the materials are stored and used in your facility.
- c. Handle appropriately any damaged containers of allergens to minimize cross-contamination at receipt.

#### 2. Store -

- a. Store allergenic ingredients or products separately to prevent minimize cross-contamination.
- b. Using clean and closed containers.



- c. Designating separate storage areas for allergenic and non-allergenic ingredients and/or products. When segregated storage is not possible, use other methods such as not storing allergens over non-allergens, storing like allergens (peanuts and peanut butter) together, etc.
- d. Using and documenting clean up procedures for spills or damaged containers of allergens.
- e. Using dedicated pallets and bins.

**3. During production –**

- a. Ensure the traffic patterns of raw materials, packaging supplies, and employees are limited during the production of allergen containing products and do not lead to cross-contact.
- b. If possible, have dedicated processing equipment and containers to prevent allergen cross-contact.
- c. Declare allergens on labels, for all product, including rework, and intermediate products.

**4. Sanitation –**

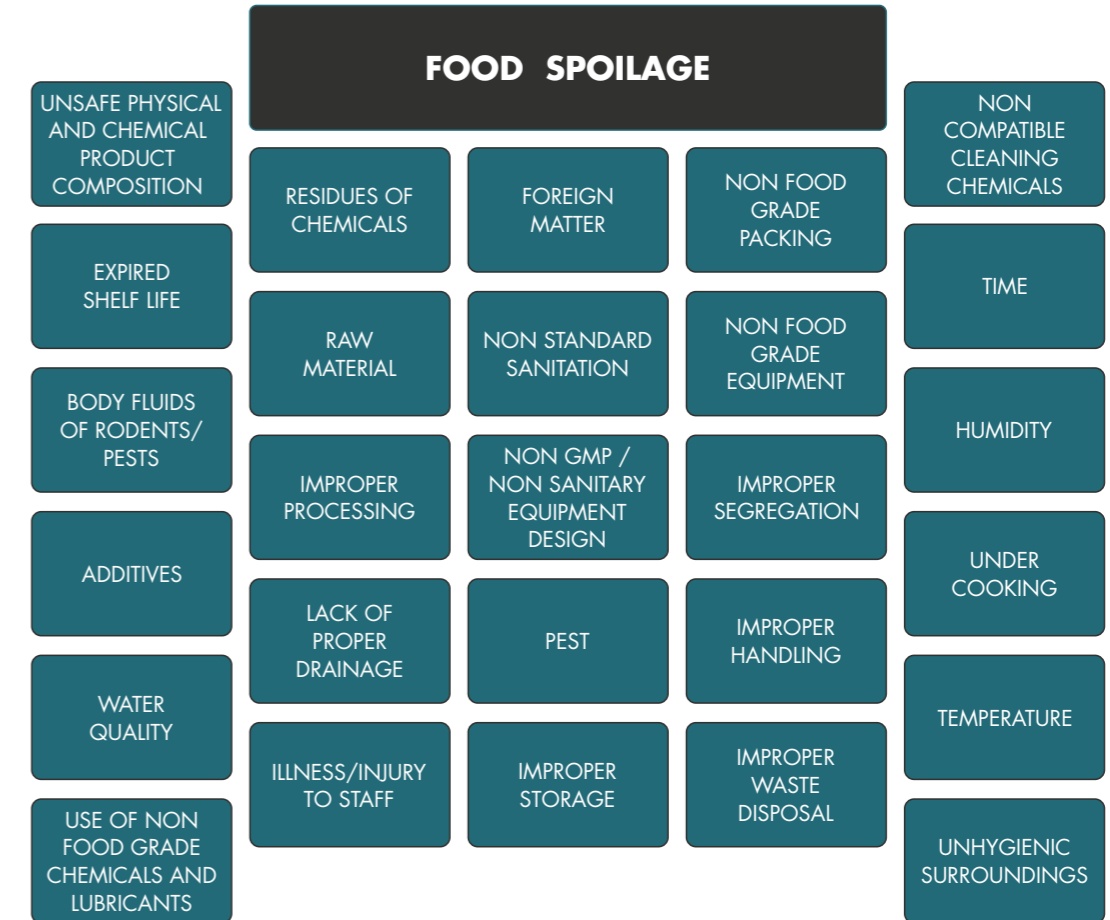
- a. Have standardized procedures for sanitation operations (SSOP's) and ensure they are followed
- b. Use appropriate cleaning methods (vacuum, soap and water wash, proper chemicals).
- c. Ensure adequate lighting in the proper locations (including flashlights to check inside equipment)
- d. Specify employee practices - hand washing at appropriate times (for example after handling a product that contains allergens, such as peanuts); proper hand washing procedures; clean clothing/aprons.

**FOOD SPOILAGE**

Food spoilage occurs when the original nutritional value, texture and/or flavour of the food are affected or degraded, the food become harmful to people and unsuitable to eat.

**Major reasons for food spoilage are -**

**1. Foreign matter :** Human hair, stapler, metal particles, fabric, plastic, glass pieces etc. are big threats to food safety and can cause food spoilage. Anything that is not considered as food or food substance is considered as foreign matter.



**2. Lack of proper drainage :** A drain in a food processing area must have proper slope to ensure no back flow and should be smooth-surfaced and easy to clean, preventing re-entry of pests from a common drain.

**3. Non- food grade equipment :** There are many equipment that are used in food processing, and it is essential that non-corrosive, non-migrating food grade material such as Stainless Steel is used for the equipment in order to prevent metal contamination, chemical contamination and ensure food safety.

**4. Improper handling :** Unclean hands, wrong selection of equipment and packing in unsuitable material could result in food safety issues.

**5. Improper processing :** Wrong process methods can lead to major changes in end product. Right temperature, right time, proper additives and understanding process steps is essential to ensure food safety.

**6. Residues of chemicals :** Chemicals come into contact in food as crop contaminants then later in the process of sanitizing voluntarily by our process. The next involuntary entry of chemicals into food can be through residues of equipment or utensil sanitation operations. It is important to ensure thorough washing is done before equipment is taken into production.

**7. Non-standard sanitation :** Sanitation must be based on strict guidelines of either historical data or validation. If chemicals are used in less or more quantity or in an unverified process or method, sanitation will fail to achieve proper results giving way for food to become unsafe.

**8. Raw materials :** Raw material selection must be based on strict scientific reference and frequent sampling.

**9. Additive :** Additives of any nature like essence, flavors etc. can spoil food if not used in the right quantity. Unauthorized additive also must not be used.

**10. Water Quality :** Water is involved in food process in various stages from washing to soaking then involved in either directly food production as an ingredient or in some in-direct manner as steam. It is also important for washing and sanitation operations. Potable water should conform to the specifications of IS 10500:2012.

**11. Improper storage :** Storage must not only be done by FIFO( First In First Out)or FEFO (First Expiry First Out) method but also properly segregated and with required ventilation. Right combination of duration, temperature ventilation and segregation defines a good storage. Any deviation in one of these could result in food becoming unsafe.

**12. Illness/Injury to staff :** Food safety is much dependent on the food handler's personal behavior and health status. A person with cough, cold, open wound, itching and any illness which is of an irritable nature tends to make him handle things without washing his hands after touching the body. The most common danger to food safety is from cough and cold and open wounds for food handlers.

**13. Improper segregation :** Where certain food products contain allergens, the appropriate segregation of RM, equipment, tools and final product is important to ensure consumer safety,

**14. Humidity :** Humidity is a major cause for enabling microbial growth, and rancidity. Food zones must have lower than 65 % humidity to ensure food safety.

**15. Temperature :** Temperatures of processing, holding, storing, transporting, are all important factor in food being safe.

**16. Time :** No raw material or finished product should be held beyond designated shelf life.

**17. Non-food grade packing :** Intermediate and final product should be packed only in acceptable packing material to ensure food safety.

**18. Pest :** Care must be taken to plan pest control devices and other forms of controls to ensure that they are highly restricted from either getting into product or contaminating product resulting in food safety issues.

**19. Body fluids of rodents/pests :** Contamination may be caused by body fluids like urine, fecal matter of rodents, reptiles, pests, nocturnal animals and birds present in the storage yard, marketing yard, transportation etc.

**20. Improper waste disposal :** Waste is an outcome of process but often present very close to the process region. If it is not disposed in a hygienic manner it can breed pest and micro-organisms which are a threat to food safety.



## PART II

# GMP-GHP FOR ORGANIZED BIG RETAILERS

- Location and surroundings
- Layout and design of food premises / retail shops
- Equipment and containers
- Facilities
- Operations and Controls
- Management and Supervision
- Food testing facilities
- Audit, documentation and records
- Sanitation and Maintenance of Establishment Premises
- Personal Hygiene
- Product Information and Consumer Awareness
- Training

## LOCATION AND SURROUNDINGS

Processing / shop premises / retail outlets shall be located away from sources of pollution like open drains, garbage yards, industries that emit fumes or gases and dense vegetation. In order to avoid contamination from external sources such as odour, pests, dust etc., appropriate measures shall be taken to protect the premises from environmental contamination. The premises shall not have direct access to any residential area.



## LAYOUT AND DESIGN OF FOOD PREMISES / RETAIL SHOPS

Layout of the premises / retail store shall enable separate and designated areas for storing of different varieties of products. (E.g. food and non-food items, veg. and non-veg. items, perishable and long shelf life products shall be well segregated during storage, which helps in prevention of cross-contamination).



Floors, walls, ceilings, doors should be designed :

- a. To minimize accumulation of dirt
- b. To be smooth and easy to clean
- c. To be made up of impervious material
- d. To not have flaking paint or plaster

Walls of the premises shall be tiled at operational height from the floor to facilitate easy cleaning. Floor shall have appropriate slope to facilitate draining and drainage shall flow in opposite

direction to storage of food. Outside openings to the environment like windows, ventilators at the food counters, drainage openings shall be well screened to control pest entry inside the premises. Doors can be fitted with automatic closing spring, strip or air curtains.

## EQUIPMENT AND CONTAINERS

During handling/ processing/ storage of food products (especially loose food items like cereals, grains, dry fruits, bakery ingredients, flour, etc.) certain equipment for e.g. scoops, spoons, cooking vessels, containers, etc. comes into contact with food. All these food contact surfaces shall be :



- made up of non-corrosive / rust-free material
- smooth, free from any grooves
- easy to clean and maintain
- non-toxic and non-reactive
- of food grade quality

Generally food grade stainless steel or galvanized iron material is preferred as it complies with the above requirements.



All equipment used during food handling and packaging (if any) shall be designed, located and fabricated to facilitate easy cleaning and shall be kept away from impure air and dust. All equipment shall be kept clean, repaired and maintained in sound condition all the time. Chipped enamelled containers shall be discarded immediately from the premises. For cleaning of disassembled equipment, utensils and containers, a separated and identified cleaning area shall be provided with adequate potable water supply, drainage system and cleaning agents.

To collect waste or by-product during any kind of processing, it shall be separated from the final product and well identified. Waste generated in the premises shall be collected in dustbins and dustbins shall be provided with lid, identified to a specific area and cleaned regularly.

Containers used to store cleaning chemicals, pesticides, solvents, etc. shall be well identified and stored at a designated place away from food material storage or food handling area to avoid accidental contamination.

All measuring instruments / equipment like temperature gauges of refrigerators and chillers, weighing balances, etc. shall be checked periodically and maintained properly for correct measurement.

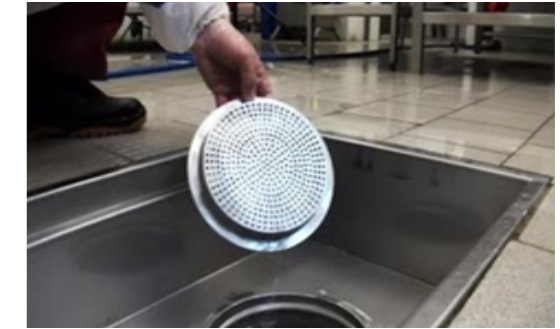
## FACILITIES



**a. Water supply :** Water used in cleaning of equipments / containers / cooking vessels (wherever applicable) should be potable and should not introduce any hazards or contaminate the food products. Clean and safe water storage facilities shall be provided. The water storage tanks shall be cleaned periodically and records for the same shall be maintained in a register. If non-potable water is used anywhere in cleaning of containers / areas which are not in use for food processing / handling / storage then the concerned pipeline shall be identified as such or differentiated from potable water.

### b. Drainage and waste disposal :

Waste generated during processing like spillage of products, spoiled product due to damaged / broken packing material while handling / storage, left-overs, disposable plates, etc. shall be collected regularly and such collected waste shall be stored in a manner that it will not contaminate the food process and storage area inside/outside the environment of the premises. Collected waste shall periodically be handed over to a local waste-collecting body or disposed of in an appropriate manner that will not cause any hazards.



**c. Personal facilities and toilets :** Personal facilities include hand washing and drying system with potable water supply, adequate and separate lavatories and changing facilities.



Hand wash facilities shall be provided with hot or cold running water with self-closing /or elbow operated tap, soap solution, hand drying system/ towel and disinfectant. Adequate number of separate clean toilets for males and females, refreshment rooms and changing rooms (wherever applicable) shall be provided at suitable locations and these shall not have direct access to the process/storage area. To generate awareness in food handlers, display boards for 'Do and Don'ts, Personal Hygiene, Personal Behaviour and

Good Manufacturing Practices shall be put up at prominent places with pictorial information and instructions in an understandable language or the local language.

**d. Air quality and ventilation :** Ventilation systems (in case of food counters) shall be designed in such a way that contaminated air shall not flow towards the clean area.



**e. Lighting :** Adequate lighting facility shall be provided to enable the food handlers to operate in a hygienic manner. Lighting shall be protected/covered to prevent contamination due to accidental breakages.



## OPERATIONS AND CONTROL

**a. Procurement of raw material :** Raw material shall be free from extraneous matter, parasites and pesticides and should be checked before acceptance for cleanliness in case of small food retail counters preparing bakery items, chaat, South Indian items, etc. Food additives added or to be added shall conform to all regulations and standards that are laid down under FSSAI 2006 and records shall be maintained for source of procurements.

**b. Storage of raw materials and food :** The food storage facility shall be designed and constructed to protect food from any contamination and permit adequate cleaning and maintenance activity. During storage of products, good storage practices shall be followed like:

- I. Separation and segregation of material (RM, PM, FG)
- II. Identification
- III. FIFO system
- IV. Storage shall be off the floor and away from the wall



### **c. Food processing/ preparation, packaging and distribution/ service :**

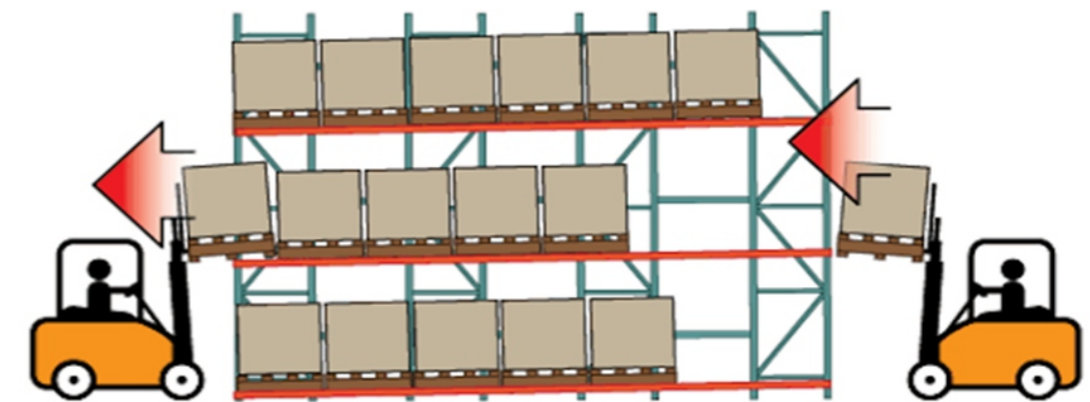
As a measurable process parameter, the temperature of storage of food products under refrigerated/chilled conditions shall be monitored. Time and temperature also shall be noted during cooking (in case of food counters). For frozen food/ raw materials used / handled / transported, care should be taken so that the defrosted/ thawed material is not stored back after opening.

**d. Food packaging :** Packaging material shall be stored in clean containers which are free from pest/rodent infestation. Packaging material used for packing shall be made of food-grade material. It shall conform to regulatory standards mentioned in Food Safety & Standards Regulation 2011.



**e. Food distribution service :** During transportation processed / packaged and / or ready-to-eat foods shall be protected from contamination and hygienic and sanitary conditions shall be maintained. Transportation vehicles shall be used only for food use and no non-food item shall be stored along with it. Also cleaning and disinfection of vehicles shall be carried out between loads when high-risk products like fish, meat, poultry, eggs etc. are transported in the same vehicle. If transportation is outsourced then transporters must have a FSSAI License.

Temperature controlled vehicles shall be used (whenever applicable) for transportation of perishable and such other food items.



## MANAGEMENT AND SUPERVISION

Standard operating procedures (SOPs) for every operation such as receiving of raw material (wherever applicable), processing, packaging, dispatch and storage shall be prepared. Operations shall be carried out as per the SOP and it shall be easily available.

Technical persons who have appropriate qualification, knowledge and skills for supervision on the process shall be appointed to ensure food safety and quality and to take preventive and corrective actions.



## FOOD TESTING FACILITIES

Regular testing of the processed food products shall be done through an accredited lab notified by the FSSAI. If complaints are received for any of the product sold, the retailer / FBO shall voluntarily arrange for testing from external laboratory.



## AUDIT, DOCUMENTATION AND RECORDS

Periodic review of GMP and GHP systems shall be carried out to find gaps and corrective actions. Records of daily production / sales, raw material utilized (wherever applicable) should be made available.

Appropriate records shall be maintained for a period of one year or the shelf life of the product; whichever is more. Some common examples of records maintained are records for raw material / product receiving, processing, laboratory test results [for raw material (if applicable), finished product and water], pest control, cleaning and housekeeping records, personal hygiene, waste disposal, daily sales and stock register, etc.



## FOOD TESTING FACILITIES

**a. Cleaning and maintenance :** Detailed cleaning and maintenance program shall be developed indicating specific areas to be cleaned, cleaning frequency, procedure, equipment, cleaning material and method.

Cleaning chemicals and tools shall be stored away from the food material at a designated place. Cleaning chemicals shall be clearly identified, along with instructions for use.



**b. Pest control systems :** Pests generally taken into account are rodents and insects. Processing premises and equipment shall be kept in clean, good and repaired condition to avoid pest harbourage.

In order to control pests it is necessary to maintain a non-attractive environment which includes isolated storage of unutilized materials and storage away from wall and off the floor.

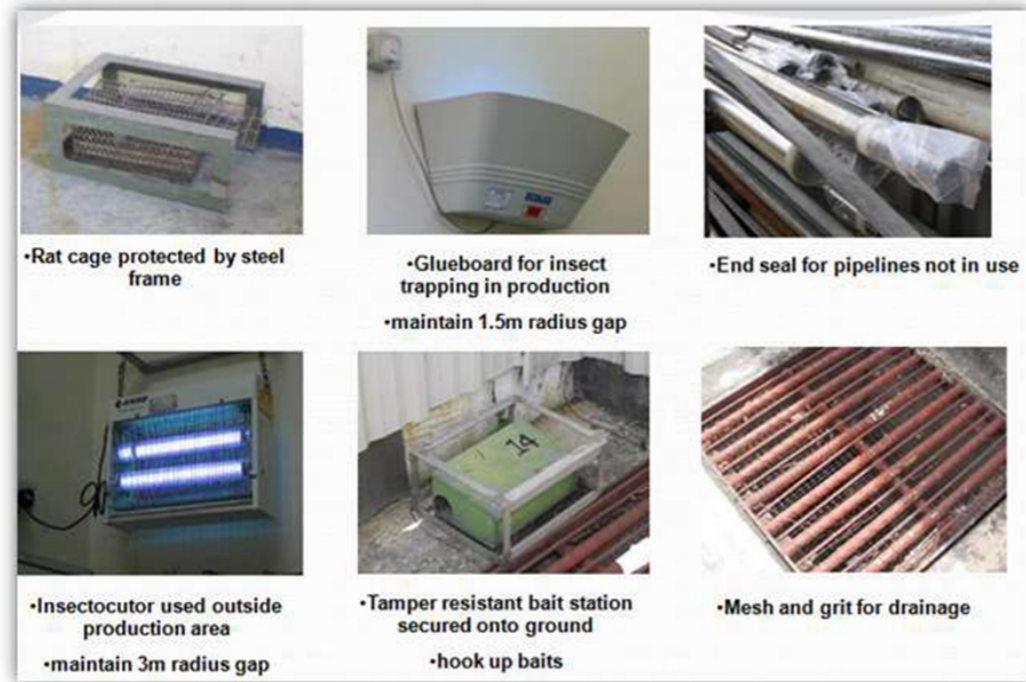
A pest control program shall be developed and records shall be maintained along with date and frequency.

To control pests, adequate control measures shall be in place

- i. For insects – insect-killer, fly-catcher, fly-killer
- ii. For rodents – roda-box, rat trap

All food materials shall be stored in pest-proof containers stacked above the ground and away from the walls.

### Some of the pest control methods



### PERSONAL HYGIENE

**a. Health status :** Develop a system and communicate to all personnel to inform management in case of any illness, symptoms of illness or injury.

Don't allow personnel in direct contact with food material to work if they have symptoms of illness, contagious disease, skin disease, or have cuts and burns.

Medical examination shall be carried out annually to ensure that the food handlers are free from any infectious, contagious and other communicable diseases.

Periodically, health check-ups and vaccination shall be carried out for all the food handlers and records shall be maintained.

**b. Personal cleanliness :** Personnel engaged in handling of open and loose food products (for e.g. flours, grains, fruits and vegetables, etc.) shall follow good hygienic practices viz.

- i. Wearing clean clothes / protective clothing
- ii. Frequent hand washing
- iii. Trimming hair and nails

Maintaining hygienic personal behaviour :

- i. Avoid smoking, spitting, sniffing
- ii. Do not eat or drink in processing area
- iii. Avoid certain habits viz. scratching nose, running fingers through hair, scratching body parts, etc.



**c. Visitors :** Visitors shall be discouraged to visit the process area at the food counter / retail store and if necessary or urgent then proper care shall be taken to ensure food safety and hygiene. To visit processing, packaging or storage areas, visitors shall follow all safety and hygiene measures like wearing protective clothing and washing hands.

### PRODUCT INFORMATION AND CONSUMER AWARENESS

All packaged food products shall be labelled as per labelling guidelines described in FSSR 2011 viz.

- a. Name of product
- b. Ingredients
- c. Nutritional information
- d. Veg / non-veg logo
- e. Name and address of manufacturer
- f. Net quantity
- g. Lot / batch code
- h. Date of manufacture
- i. Best before' date, etc.



### TRAINING

Regular and effective training shall be provided to food handlers on topics like personal behaviour, personal hygiene, and food safety during handling food, storage, FIFO etc.; and the effectiveness of these training programs shall be evaluated by observation, asking questions to food handlers and maintaining proper records.





## PART III

# GMP-GHP FOR CATERING / FOOD PREPARATION FACILITIES IN BIG RETAIL FORMAT

- Good Manufacturing Practices for whole premises
- Good Food Hygiene Practices
- Personal Hygiene
- Transportation and Handling of Food
- Storage
- Special Requirements for High Risk Foods

## GOOD MANUFACTURING PRACTICES FOR WHOLE PREMISES

### a. Food Preparation Areas :

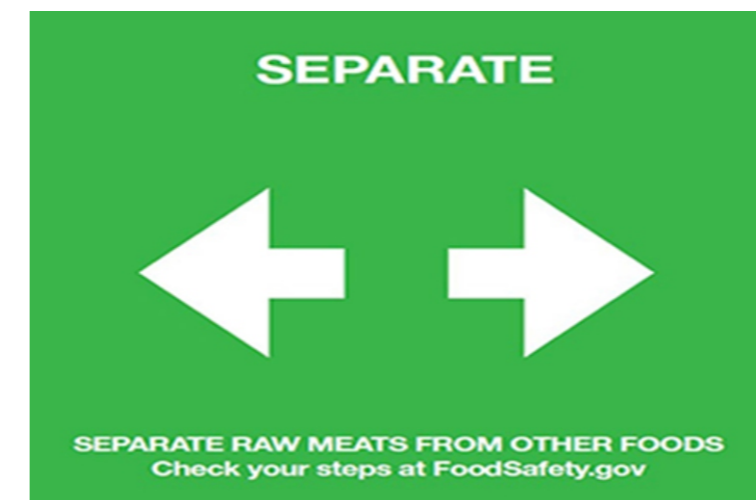
In case cooking / frying activity takes place at a particular food counter, a chimney shall be in place to control the smoke nuisance.

**b. Hand washing facilities** and toilets shall be adequate in number and shall be equipped with :

- i. Soaps to wash hands
- ii. Hot and cold running water
- iii. Disposable paper towel or hand napkin or hand dryer to dry hands
- iv. Clean and dry towels or hand dryers for the use of customers



**c. As far as possible, raw food (wherever required) and equipment / food containers** shall be washed in separate sinks, or the sink should be cleaned and sanitised before use for washing of raw food or equipment/food containers.



d. **Facilities for staff to change** their clothes, wherever necessary must be provided.

## GOOD FOOD HYGIENE PRACTICES

### a. Cleaning -

- Food areas and equipment at frequent intervals
- Food contact surface in case of food / water / drink spillage
- Cleaning schedule and instructions shall be developed by the FBO and it shall be followed by the food handlers

The schedule should include-

- What needs to be cleaned
- How often it needs to be cleaned
- How the cleaning should be done

Cleaning instructions should indicate –

- What cleaning products should be used
- How the products should be stored (away from raw, cooked and packed food) and used
- How much they should be used or diluted
- How long that should be left in contact with the surface.



### b. Cooking (wherever applicable) -

- Ensure proper cooking is done in case of non-vegetarian products
- Raw meat and processed meat should be separated from other foods, items and surfaces
- Ensure frozen products are thawed properly
- Preparation / processing / cooking of veg. and non-veg. products should be segregated.
- Whenever cooking or re-heating food, it should be ensured that food is cooked thoroughly.
- Re-use of cooking oil should be avoided. In case of re-heating, it should not be used more than three times.
- Food shall be hot held at 60°C and cooled at 21°C within 2 hrs. or cooled to 5°C in 4 hours.
- Re-heated food must reach a minimum internal temperature of 74°C.

### c. Chilling (wherever applicable) -

- Short shelf life food items / cooked dishes shall not be left standing at room temperature
- Chilled food intended for consumption should be cold enough
- Chilled food must be processed in the shortest time possible
- Fridge and display unit must be cold enough (at 5°C) and as per requirement
- The displays of fridge and chillers shall be maintained in good working condition.

### d. Cross-contamination –

Following should be done to avoid cross-contamination

- Raw food / meat / poultry and ready-to-eat foods should be kept separate at all times
- Hands shall be washed thoroughly after touching raw meat / poultry
- Work surfaces, chopping boards and equipments shall be thoroughly cleaned before food preparation and after use
- Separate chopping boards and knives for raw fruit / vegetables / meat / poultry and ready to eat food should be used
- Raw meat / poultry should be kept below ready-to-eat food in the fridge
- Staff should be made aware how to avoid cross-contamination.



## PERSONAL HYGIENE

- High standards of personal hygiene should be maintained.
- Employees handling food shall wash hands properly.
- Food handlers should not handle soiled currency notes to avoid cross-contamination.





## TRANSPORTATION AND HANDLING OF FOOD

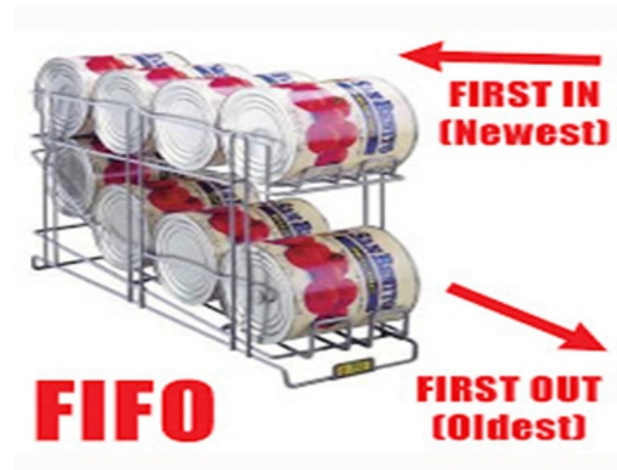
- Dedicated and clean transportation vehicles shall be used.
- Transportation time should be minimum to avoid microbial proliferation.
- Cooked food served hot and cooked food served cold shall be kept at 60°C and 5°C respectively to prevent microbial and pathogen growth.
- Minimum handling of food shall take place and food contact surfaces shall be cleaned and sanitized regularly.
- All surplus and unused thawed food shall be discarded.
- All packaged food viz. sterilized milk, bottled beverages, canned foods, etc. should be stored properly during transportation so that the seals don't get damaged.

## STORAGE

Adequate storage of food is very important for the purpose of food safety. It must be ensured that:

- Food should be cooked, stored and kept at the right temperature
- Separate storage for raw meat / poultry from other foods
- Storage of veg. foods above non-veg. foods and cooked foods above un-cooked foods on separate racks in the refrigerator
- Frozen food storage at -15°C or below
- Cooked food to be eaten later should be cooled quickly and a date shall be put on food packages / containers to keep track of food prepared date-wise and use accordingly to minimize wastage.
- Storage instructions over food packaging should be followed
- Dried foods (e.g. grains and pulses) should be stored off the floor, in sealable containers

Prevent wastage by following stock rotation with FIFO (First In, First Out) to make sure that older food is used first.



## SPECIAL REQUIREMENTS FOR HIGH RISK FOODS

### a. Cut fruits / salads, fresh juices and beverages :

- Refrigerated in sanitized and properly covered vessels and should be used immediately
- Water used in beverages should be potable
- Juice concentrates must be checked regularly for any fungal growth / change of colour, odour or gas formation in the bottle
- Juice dispensing machine should be cleaned and rinsed with water regularly

### b. Confectionery products :

- Shall be kept in air tight containers and displayed hygienically
- Cream to be used shall be stored covered under refrigeration
- Products to be properly wrapped / packaged after proper cooling
- Finished products to be refrigerated with proper labels indicating date of expiry

### c. Meat, poultry and fish products :

- Processing area should be cleaned and disinfected properly
- Non-veg. products shall be washed with potable water before use
- Non-veg. products shall be cooked thoroughly for at least 15 secs. An effective time / temperature control would be 65°C for 10 mins or 70°C for 2 mins, while maintaining this temperature at the core for 15 seconds.
- Shall be stored covered in refrigerator below the veg. products
- All refuse / waste should be promptly removed from preparation area

### d. Water-based chutneys, sauces, etc. :

- All the fruits and vegetables shall be washed properly before processing and chopping boards / machine shall be cleaned and disinfected before use
- Water used shall be safe and potable
- Sauces and chutneys shall be stored in glass / food grade plastic containers with proper lids
- Perishable / uncooked chutneys should be consumed immediately

### e. Foods transported to point of sale from the point of cooking :

- Should be re-heated more than 74°C before consumption
- Consumed or served for consumption within 4 hrs of reheating

### f. Foods with gravy :

- Not to be stored for more than two hours at room temperature during display or sale
- For prolonged storage, foods should be stored in refrigerators or kept for hot holding at or above 60°C.
- No addition of water after cooking / reheating / boiling

### g. Fried foods :

- Good quality / branded oils / fats should be used for food preparation, frying etc.
- Only packaged oil shall be used
- Use of oils with high trans fats (like vanaspati) should be avoided

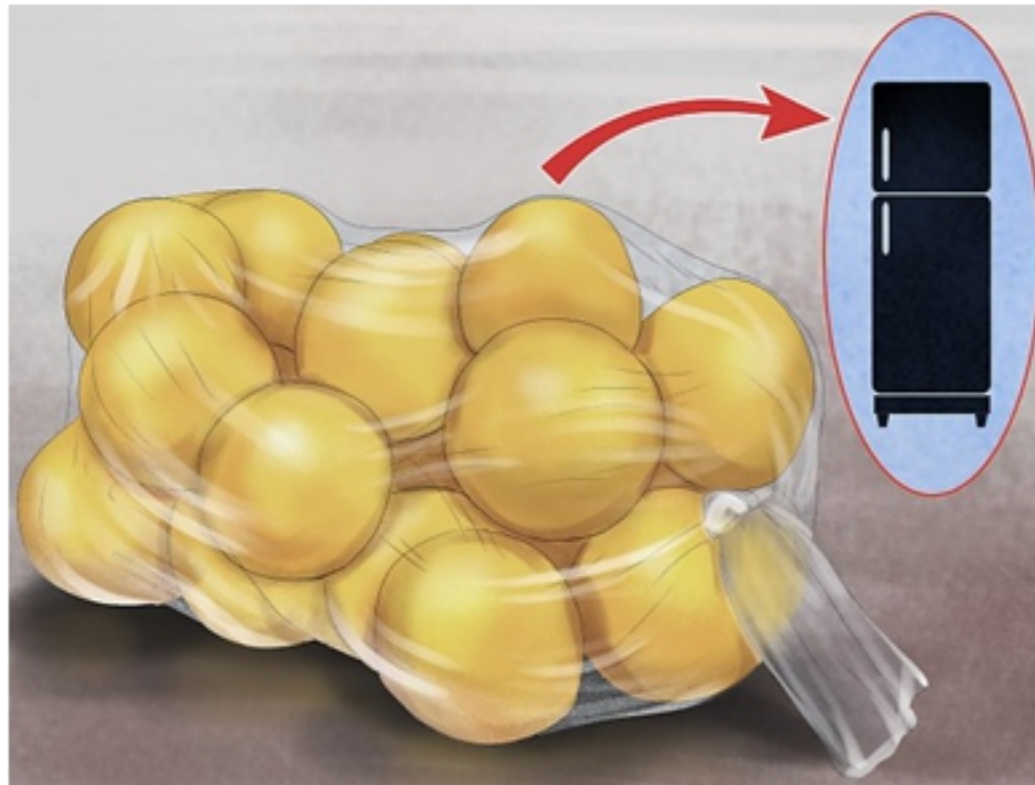
- Re-heating & re-use of oil, and using left over oil shall also be avoided

#### **h. Adding ingredients after cooking :**

- Ingredients added to cooked food should be thoroughly washed / cleaned
- Garnishes etc., if added shall be prepared using fresh, thoroughly washed and freshly cut vegetables and used immediately
- Re-use of cooked food is not recommended

#### **i. Thawing of frozen products :**

- Thawed food products shall be labelled with defrost date and time
- Thawing of food in refrigerator shall take place at 5°C or less while thawing in running water should not exceed 90 minutes
- Temperature controlled thawing is recommended for meat, poultry and fish
- After thawing, product must be used within 12 hours
- Cold running water in case of thawing in running water shall be at 15°C or less
- Any other means of thawing apart from running water and microwave is not allowed





## LOCATION AND SURROUNDINGS

Premises where food is being stored by the wholesaler before distribution shall be located away from sources of pollution like open drains, garbage yards, industries that emit fumes or gases and dense vegetation. In order to avoid contamination from external sources such as odour, pests, dust etc., appropriate measures shall be taken to protect the premises from environmental contamination. The premises shall not have direct access to any residential area.

## LAYOUT AND DESIGN OF FOOD PREMISES/RETAIL SHOPS

Layout of the food premises shall enable separate and designated areas for storing of different varieties of products. (E.g. food and non-food items, veg. And non-veg. items, perishable and long shelf life products shall be well segregated during storage, which helps in prevention of cross-contamination).

Floors, walls, ceilings, doors should be designed :

- a. To minimize accumulation of dirt
- b. To be smooth and easy to clean
- c. To be made up of impervious material
- d. To not have flaking paint or plaster

Walls of the premises shall be smooth painted or tiled at operational height from the floor to facilitate easy cleaning.

Floor shall have appropriate slope to facilitate draining (during cleaning of the premise). Outside openings to the environment like windows, drainage openings shall be well screened to control pest entry inside the premises.



## PART IV

# GMP-GHP FOR WHOLESALERS

- Location and Surroundings
- Layout and design of food premises / retail shops
- Equipment and Containers
- Facilities
- Operations and Control
- Audit, documentation and records
- Sanitation and maintenance of storage premises
- Personal Hygiene
- Training



## EQUIPMENT AND CONTAINERS

During handling and storage of food products certain equipments like trolleys, racks, etc. shall be made up of non-corrosive / rust free material and shall be easy to clean. They shall be well maintained and repaired / discarded if they are not found to be adequate. Cleaning of the trolleys and racks shall be carried out adequately.

Waste generated in the premises shall be collected in dustbins and dustbins shall be provided with lid and cleaned regularly.

All measuring instruments / equipment like temperature gauges of refrigerators and chillers, weighing balances, etc. shall be calibrated periodically for correct measurement.

## FACILITIES

**a. Drainage and waste disposal :** Waste generated during storage like spoiled product due to damaged / broken packing material while handling / storage, etc. shall be collected regularly and such collected waste shall be stored in a manner to not contaminate the storage area inside /outside the environment of the premises. Collected waste shall periodically be handed over to a local waste-collecting body or disposed of in an appropriate manner that will not cause any hazards.

**b. Lighting :** It is recommended to have lighting protected/covered to prevent contamination due to accidental breakages.

## FACILITIES

**a. Storage of food :** The food storage facility shall be designed and constructed to protect food from any contamination and permit adequate cleaning and maintenance activity. During storage of products, good storage practices shall be followed like :

- i. Separation and segregation of different kinds of material (e.g. agricultural commodities, processed food, veg. and non-veg. items, fruits and vegetables)
- ii. Identification of materials
- iii. FIFO (First In First Out) system –to prevent wastage and to make sure that older food is distributed first.
- iv. Storage shall be off the floor and away from the wall
- v. Storage of veg. foods above non-veg. foods and cooked foods above un-cooked foods on separate racks in the refrigerator.

- vi. Frozen food storage at -18°C or below
- vii. Dried foods (e.g. grains and pulses) should be stored off the floor, in sealable containers
- viii. Storage instructions over food packaging should be followed



**b. Food storage / service :** The temperature of storage of food products under refrigerated / chilled conditions (wherever applicable) shall be monitored. For frozen food distributed / transported, care should be taken so that the defrosted / thawed material is not stored back after opening.



## AUDIT, DOCUMENTATION AND RECORDS

Periodic review of Good Storage Practices and Good Hygiene Practices shall be carried out to find gaps and corrective actions. Records of daily inward of material for storage and daily outward should be made available.

Some common examples of records maintained are records for receiving, inventory, dispatch invoices, pest control, cleaning and housekeeping records, etc.

## SANITATION AND MAINTENANCE OF STORAGE PREMISES

**a. Cleaning and maintenance :** The facility shall be maintained clean and proper without any accumulated scrap, unwanted material, cobwebs, etc.

**b. Pest control systems :** Pests generally taken into account are rodents, lizards, insects and cobwebs.

In order to control pests it is necessary to maintain a non-attractive environment which includes isolated storage of unutilized materials and storage away from wall and off the floor. Pest control measures like mentioned can be adopted:

- i. For insects – insect-killer, fly-catcher, fly-killer
- ii. For rodents and lizards – roda-box, rat trap
- iii. For cobwebs – Proper cleaning of cobwebs

All food materials shall be stored in pest-proof containers stacked above the ground and away from the walls.



## PERSONAL HYGIENE

**a. Cleaning and maintenance :** The facility shall be maintained clean and proper without any accumulated scrap, unwanted material, cobwebs, etc.

**b. Pest control systems :** Pests generally taken into account are rodents, lizards, insects and cobwebs.

In order to control pests it is necessary to maintain a non-attractive environment which includes isolated storage of unutilized materials and storage away from wall and off the floor. Pest control measures like mentioned can be adopted:

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- ii. For rodents and lizards – roda-box, rat trap
- iii. For cobwebs – Proper cleaning of cobwebs

All food materials shall be stored in pest-proof containers stacked above the ground and away from the walls.

### PERFORMA FOR MEDICAL FITNESS CERTIFICATE FOR FOOD HANDLERS

(FOR THE YEAR .....)

(See Para No. 10.1.2, Part-II, Schedule - 4 of FSS Regulation, 2011)

It is certified that Shri/Smt./Miss.....  
employed with M/s....., coming in direct  
contact with food items has been carefully examined\* by me on date .....  
Based on the medical examination conducted, he/she is found free from any  
infectious or communicable diseases and the person is fit to work in the above  
mentioned food establishment.

Name and Signature with Seal  
of Registered Medical Practitioner /  
Civil Surgeon

#### \*Medical Examination to be conducted:

1. Physical Examination
2. Eye Test
3. Skin Examination
4. Compliance with schedule of Vaccine to be inoculated against enteric group of diseases
5. Any test required to confirm any communicable or infectious disease which the person suspected to be suffering from on clinical examination.

**b. Personal cleanliness :** Hygienic personal behaviour shall also be maintained like:

- i. No smoking, spitting, sniffing
- ii. No eating or drinking in processing area

**c. Visitors :** Visitors shall be discouraged to visit the storage area and if or urgent then Visitors shall be given head gears before allowing them inside the storage area.



## TRAINING

Regular and effective training shall be provided to food handlers on topics like food safety during handling food, storage, FIFO, GMP, GHP, Personal Hygiene, HACCP, Rejected Food Management & Control and basic regulatory requirements.



## LOCATION AND SURROUNDINGS

Premises where food is being stored before distribution shall be located away from sources of pollution like open drains, garbage yards, industries that emit fumes or gases and dense vegetation. In order to avoid contamination from external sources such as odour, pests, dust etc., appropriate measures shall be taken to protect the premises from environmental contamination. The premises shall not have direct access to any residential area.

## LAYOUT AND DESIGN OF FOOD PREMISES

Layout of the food premises shall enable separate and designated areas for storing of different varieties of products. (E.g. food and non-food items, veg. and non-veg. items, perishable and long shelf life products shall be well segregated during storage, which helps in prevention of cross-contamination).

Floors, walls, ceilings, doors should be designed

- To minimize accumulation of dirt
- To be smooth and easy to clean
- To be made up of impervious material
- To not have flaking paint or plaster

Walls of the premises shall be smooth, painted or tiled at operational height from the floor to facilitate easy cleaning.

Floor shall have appropriate slope to facilitate draining (during cleaning of the premise) and drainage shall flow in opposite direction to storage of food. Outside openings to the environment like windows, drainage openings shall be well screened to control pest entry inside the premises.

## EQUIPMENT AND CONTAINERS

During storage of food products certain equipments like trolleys, racks, etc. shall be made up of non-corrosive / rust free material or painted and shall be easy to clean. They shall be well maintained and repaired / discarded if they are not found to be adequate. Cleaning of the trolleys and racks shall be carried out adequately.

Waste generated in the premises shall be collected in dustbins and dustbins shall be provided with lid and cleaned regularly.

Containers used to store cleaning chemicals, pesticides, solvents, etc. shall be well identified

## PART V

# GMP-GHP FOR DISTRIBUTORS

- Location and Surroundings
- Layout and design of food premises
- Equipment and Containers
- Facilities
- Operations and Control
- Management and Supervision
- Audit, documentation and records
- Sanitation and maintenance of storage premises
- Personal Hygiene
- Training

## OPERATIONS AND CONTROL

and stored at a designated place away from food product storage to avoid accidental contamination.

All measuring instruments / equipment like temperature gauges of refrigerators and chillers, weighing balances, etc. shall be calibrated periodically for correct measurement.



## FACILITIES

**a. Water supply :** Non-potable water can be used for cleaning of the food storage premises, racks and trolleys, etc. Clean and safe water storage facilities shall be provided. The water storage tanks shall be cleaned periodically. The pipeline for non-potable water shall be identified / differentiated from potable water pipeline.

**b. Drainage and waste disposal :** Waste generated during storage like spoiled product due to damaged / broken packing material while handling / storage, etc. shall be collected regularly and such collected waste shall be stored in a manner to not contaminate the storage area inside /outside the environment of the premises. Collected waste shall periodically be handed over to a local waste-collecting body or disposed of in an appropriate manner that will not cause any hazards.

**c. Personal facilities and toilets :** Personal facilities shall include adequate and separate lavatories. To generate awareness in food handlers, display boards for do's and don'ts, Personal Behaviour and Good Storage Practices shall be put up at prominent places with pictorial information and instructions in an understandable language or the local language.

**d. Lighting :** Adequate lighting facility shall be provided to enable the food handlers to operate in a hygienic manner. Lighting shall be protected/ covered to prevent contamination due to accidental breakages.

**a. Storage of food :** Adequate storage of food is very important for the purpose of food safety. The food storage facility shall be designed and constructed to protect food from any contamination and permit adequate cleaning and maintenance activity. During storage of products, good storage practices shall be followed like :

- i. Separation and segregation of material
- ii. Identification of products
- iii. FIFO system
- iv. Storage shall be off the floor and away from the wall
- v. Separation and segregation of different kinds of material (e.g. agricultural commodities, processed food, veg. and non-veg. items, fruits and vegetables)
- vi. Storage of veg. foods above non-veg. foods and cooked foods above un-cooked foods on separate racks in the refrigerator.
- vii. Frozen food storage at -18°C or below
- viii. Dried foods (e.g. grains and pulses) should be stored off the floor.
- ix. Storage instructions over food labels/boxes should be followed.



**b. Food distribution :** As a measurable process parameter, the temperature of storage of food products under refrigerated / chilled conditions (wherever applicable) shall be monitored. For frozen food distributed / transported, care should be taken so that the defrosted / thawed material is not stored back after opening.

**c. Food distribution service :** During transportation processed / packaged and / or ready-to-eat foods shall be protected from contamination and hygienic and sanitary conditions shall be maintained.

Transportation vehicles shall be used only for food use and no non-food item shall be stored along with it.

Also cleaning and disinfection of vehicles shall be carried out between loads when high-risk products like fish, meat, poultry, eggs etc. are transported in the same vehicle. If transportation is outsourced then transporters must have a FSSAI License in case of special products like chilled or frozen foods, etc.

Temperature controlled vehicles shall be used (whenever applicable) for transportation of perishable and such other food items.



## MANAGEMENT AND SUPERVISION

Standard operating procedures (SOPs) for receiving, storage and distribution of every lot and variety of food products shall be prepared. Operations shall be carried out as per the SOP and it shall be easily available.

Technical persons who have appropriate qualification, knowledge and skills for supervision on the storage and distribution process shall be appointed to ensure food safety and quality and to take preventive and corrective actions.



## AUDIT, DOCUMENTATION AND RECORDS



Periodic review of Good Storage Practices and Good Hygiene Practices shall be carried out to find gaps and corrective actions. Records of daily inward of material for storage and daily outward should be made available.

Some common examples of records maintained are records for product receiving, pest control, cleaning and housekeeping records, etc.

## SANITATION AND MAINTENANCE OF STORAGE PREMISES

**a. Cleaning and maintenance :** Detailed cleaning and maintenance program shall be developed indicating specific areas to be cleaned, cleaning frequency, procedure, equipment, cleaning material and method.

Cleaning chemicals and tools shall be stored away from the food material at a designated place. Cleaning chemicals shall be clearly identified.

**b. Pest control systems :** Pests generally taken into account are rodents and insects. Storage premises and equipment shall be kept in clean, good and repaired condition to avoid pest harbourage.

In order to control pests it is necessary to maintain a non-attractive environment which includes isolated storage of unutilized materials and storage away from wall and off the floor.

A pest control program shall be developed and records shall be maintained along with date and frequency.

To control pests, adequate control measures shall be in place

- i. For insects – insect-killer, fly-catcher, fly-killer
- ii. For rodents – roda-box, rat trap

All food materials shall be stored in pest-proof containers stacked above the ground and away from the walls.

## PERSONAL HYGIENE

**a. Health status :** Medical examination shall be carried out annually to ensure that the food handlers are free from any infectious, contagious and other communicable diseases.

**b. Personal cleanliness :** Personnel engaged in storage and distribution of food products shall comply to the basic requirement of wearing head gears. Hygienic personal behaviour shall also be maintained like :

- No smoking, spitting, sniffing
- No eating or drinking in processing area

**c. Visitors :** Visitors shall be discouraged to visit the storage area and if or urgent then visitors shall be given head gears before allowing them inside the storage area.

## TRAINING

Regular and effective training shall be provided to food handlers on topics like food safety during handling food, storage, FIFO and the effectiveness of these training programs shall be evaluated by observation, asking questions to food handlers and maintaining proper records.



## OPERATIONS AND CONTROL

Dedicated transportation tankers or containers used for milk, edible oil, frozen foods, etc. shall be identified clearly. These shall not be used for other purpose.

During transportation processed / packaged and / or ready-to-eat foods shall be protected from contamination and hygienic and sanitary conditions shall be maintained.

Transportation vehicles shall be used only for food use and no non-food item shall be stored along with it.

Also cleaning and disinfection of vehicles shall be carried out between loads when high-risk products like fish, meat, processed poultry, processed eggs etc. are transported in the same vehicle.

Temperature controlled vehicles shall be used (whenever applicable) for transportation of perishable and such other food items. Temperature controls, monitoring needs to be done for all such vehicles.

While part loads are done with food and non-food the products like pesticide, aromatic chemicals, hazardous chemicals shall not be transported together.

## MANAGEMENT AND SUPERVISION

Do's and Don'ts for the transportation activity need to be documented such as cleaning of vehicle and conducting its inspection before use, temperature control (wherever applicable), ensuring delivery of food products in safe and hygienic manner, etc. Non-food items shall not be transported along with sensitive food items like chocolates, milk powders, etc. Operations shall be carried out as per the SOP and it shall be easily available.

## AUDIT, DOCUMENTATION AND RECORDS

Records of daily vehicle inspection, vehicle cleaning and maintenance should be made available.



## PART VI

# GMP-GHP FOR TRANSPORTERS

- Operations and Control
- Management and Supervision
- Audit, documentation and records
- Sanitation and maintenance of transportation vehicle

## SANITATION AND MAINTENANCE OF TRANSPORTATION VEHICLE

**a. Cleaning and maintenance :** Based on the product criticality vehicles shall be cleaned adequately between the loads. Where the tarpaulins are used, needs to be washed and kept cleaned with defined frequency.



**b. Pest control systems :** Infestation needs to be monitored in the vehicles particularly closed vehicles, containers, etc. Fumigation can be practiced as required.





**SANITARY AND HYGIENIC REQUIREMENTS FOR FBOs / FOOD HANDLERS**

The place where food products like processed and packed food, bakery, fast food and dairy products with short shelf life, grains, confectionery, beverages, etc. are processed / handled shall comply with the following requirements :

**1. The establishment / premises / shop shall be :**

- a. In a place approved by local authorities
- b. In clean place, properly protected (e.g. stalls to be covered with canopy, umbrella, etc. when not in use) and not blocking traffic

**2. Location of the establishment / shop premises should not be close to :**

- Filthy surroundings,
- Heavy vegetation, loose soil
- Waste / scrap yard
- Dirt and dust
- Open drains
- Air / environmental pollution



Adequate space shall be available for processing and storage to maintain overall hygienic environment

**3. The premises should be :**

- Clean
- Adequately lighted (natural / artificial - covered tube lights, etc.),
- Ventilated (natural ventilation - adequate windows or artificial ventilation - exhaust fans, etc.)
- Sufficient space for man material movement to carry out the operations efficiently.

**4. The surfaces of the vending carts, working table, counter surfaces, serving table, and storage utensils shall be :**

- Clean and hygienic
- Sound, rust / corrosion-resistant, impermeable (preferably stainless steel material) and in good condition.
- Above the ground level (minimum 2-3 feet)
- Unbroken

**PART VII****GMP-GHP FOR SMALL RETAILERS  
APPLYING FOR REGISTRATION**

- Sanitary and Hygienic requirements for FBOs / Food Handlers



**5. Sale points, storage racks, tables, benches and boxes, cupboards, etc.** shall be clean and tidy.

**6.** Different products like short shelf life and perishable products, veg. and non-veg. products, packed products, dairy products, etc. shall be kept in separate compartments / areas wherever possible so that there is no cross-contamination.

**7. Infrastructure - floor, ceiling / roof, walls should be**

- Free from - cracks, crevices, gaps, paint peeling, etc.
- Smooth and easy to clean
- Adequately maintained
- Made up of permanent material like cement, tiles, kota stone, etc.
- Should not impart any contamination to the food

**8. Pest control :**

- Premises should be free from pest.
- Fly traps / fly swats / flaps must be installed and regularly monitored
- Doors, windows and other openings shall be covered with insect proof mesh.
- Groves, cracks, crevices must be closed effectively



**9.** There shall be potable water supply or adequate water storage facility for all purposes like washing of food containers, cleaning using in process (wherever required at the food counters) etc. and it shall be tested annually from a recognized laboratory.



VEGETABLE WASHING



UTENSIL WASHING



MEAT WASHING

**10. Equipment, utensils and containers shall be :**

- a. Smooth and easy to clean.
- b. Non-reactive with stored food material
- c. Kept clean, washed, dried and stacked away from wall



**11.** Refrigerators / fridge used for storage of perishable items / short shelf life products etc. shall be cleaned weekly and its temperature to be maintained between 4° to 6° C.

**12.** Single-use/disposable items such as paper towel, disposable cups, cleaning cloths and plates shall not be reused.

**13. Waste disposal :** It should be a daily activity to avoid accumulation of waste and contamination from pest harbourage and infestation. Adequate numbers and covered dustbins should be available. Drainage system (if available) must be properly covered, regularly cleaned and maintained. Food left in disposable plates, rubbish shall be collected in dustbins having covered.

**14. Working personnel and food handlers shall follow personal hygiene and behaviour :**

- a. Personnel shall wear clean aprons, hand gloves, and headgear.
- b. Persons suffering from infectious diseases shall not be permitted to work. Any cuts or wounds shall remain covered at all time and the person should not be allowed to come in direct contact with food.
- c. All food handlers shall
  - i. Keep finger nails trimmed.
  - ii. Wash their hands with soap frequently.
  - iii. Avoid scratching of body parts, hairs.
  - iv. Avoid wearing loose jewellery, false nails.
  - v. Avoid eating, chewing, smoking, spitting and nose blowing while food handling.



**15.** Personal belongings, such as clothes, footwear etc. should not be kept in the processing, storage and sales area.

**16.** Eating, chewing, smoking, spitting and nose blowing shall be prohibited within the premises especially while handling of food.

**17.** Perishable items such as dairy items, pastry, bread, eggs, fruits and vegetables etc. shall be kept as per sales /market requirement to avoid leftovers which may affect its safety for consumption.

**18.** Vegetarian and non-vegetarian items should be segregated and shall be placed separately (generally during storage and display vegetarian products shall be kept above the non-vegetarian items).

**19.** All articles that are stored or are intended for sale shall be fit for consumption and have proper cover to avoid contamination.

**20.** Food transportation vehicles must be maintained in good repair and kept clean and hygienic, and shall maintain the required temperature during transportation.

**21.** Cleaning chemicals, pesticides, disinfectants shall be kept and stored separately and away from food processing / storing / handling areas.







## PART VIII

# GMP-GHP FOR SMALL RETAILERS APPLYING FOR LICENSE

- Location and surroundings
- Layout and design of food premises / retail shops
- Equipment and containers
- Facilities
- Operations and Controls
- Audit, documentation and records
- Sanitation and Maintenance
- Personal Hygiene
- Labelling
- Training

### LOCATION AND SURROUNDINGS

Shop premises/ retail outlets shall be located away from sources of pollution like open drains, garbage yards, industries that emit fumes or gases and dense vegetation. In order to avoid contamination from external sources such as odour, pests, dust etc., appropriate measures shall be taken to protect the premises from environmental contamination. The premises shall not have direct access to any residential area.



### LAYOUT AND DESIGN OF FOOD PREMISES / RETAIL SHOPS

Layout of the premises / retail store shall enable separate and designated areas for storing of different varieties of products. (E.g. food and non-food items, veg. And non-veg. items, perishable and long shelf life products shall be well segregated during storage, which helps in prevention of cross-contamination).

Floors, walls, ceilings, doors should be designed

- a. To minimize accumulation of dirt
- b. To be smooth and easy to clean
- c. To be made up of impervious material
- d. To not have flaking paint or plaster



### LOCATION AND SURROUNDINGS

During handling/ processing/ storage of food products (especially loose food items like cereals, grains, dry fruits, bakery ingredients, flour, etc.) certain equipment e.g. scoops, spoons, cooking vessels, containers, etc. comes into contact with food. All these food contact surfaces shall be:

- a. made up of non-corrosive / rust-free material
- b. smooth, free from any grooves
- c. easy to clean and maintain
- d. non-toxic and non-reactive
- e. ideally stainless steel or food grade plastic or other permitted metals





Equipment used during food handling and packaging (if any) shall be kept clean. Chipped enamelled containers shall be discarded immediately. For cleaning of disassembled equipment, utensils and containers, a separated cleaning area shall be provided with adequate potable water supply, drainage system and cleaning agents.

The waste shall be separate from raw materials, finished product and kept identified. Waste generated shall be collected in dustbins having lids and need to be cleaned regularly.

Containers used to store cleaning chemicals like detergents, floor cleaners eg. phenyl, pesticides like cockroach or mosquito killers/mats/sprays, solvents like kerosene, oils, etc. shall be identified and stored at a designated place away from food material storage or food handling area to avoid accidental contamination. Liquid items shall be stored at the bottom rack to avoid contamination due to leakages.

All measuring instruments / equipment like temperature gauges of refrigerators and chillers, weighing balances, etc. shall be calibrated periodically for correct measurement.

## FACILITIES

**a. Water supply :** Water used in cleaning of equipments / containers / cooking vessels (wherever applicable) should be potable and should not be dirty or else will contaminate the food products. Clean water storage tank shall be provided which shall be cleaned periodically.

**b. Drainage and waste disposal :** Waste generated during processing like spillage of products, spoiled product due to damaged / broken packing material while handling / storage, left-overs, disposable plates, etc. shall be collected regularly stored separately away so that not contaminate the food process and storage area inside /outside the premises. Collected waste shall periodically be handed over to a local waste-collecting body or disposed of in an appropriate manner.

**c. Personal facilities and toilets :** Personal facilities include hand washing and drying system with potable water supply. Head gear shall be provided to all the food handlers and kitchen aprons (in case of bakery outlets, fast food counters, etc.). To generate awareness in food handlers, display boards for 'Do's and Don'ts, Personal Hygiene, Personal Behaviour and Good Manufacturing Practices shall be put up at prominent places with pictorial information and instructions in the local language.

**d. Air quality and ventilation :** Ventilation systems like chimneys, exhaust fans, etc. (in case of food counters) shall be designed to avoid contaminated air flow to the clean area.

**e. Lighting :** Adequate lighting facility shall be provided to enable the food handlers to

operate in a hygienic manner. Lighting shall be protected/ covered to prevent contamination due to accidental breakages.

## OPERATIONS AND CONTROL

**a. Procurement of raw material :** Raw material shall be procured from authorized known person and as applicable from licensed supplier. Material shall be free from extraneous matter, infestation and pesticides and should be checked visually for foreign matters in case of small food retail counters preparing bakery items, chaat, South Indian items, etc. Food additives added or to be added shall conform to food grade quality and shall be permitted to be used by regulations and standards that are laid down under FSSA 2006 and records shall be maintained for source of procurements.

**b. Storage of raw materials and food :** The food storage facility shall be designed and constructed to protect food from any contamination and permit adequate cleaning and maintenance activity. During storage of products, good storage practices shall be followed like :

- i. Separation and segregation of material (RM, PM, FG)
- ii. Identification of material
- iii. FIFO (First in first out) system
- iv. Storage shall be off the floor and away from the wall
- v. Shall be kept closed or covered and bags tied after the use

**c. Food processing / preparation, packaging and service :** As a measurable process parameter, the temperature of storage of food products under refrigerated / chilled conditions shall be monitored. Time and temperature also shall be noted during cooking (in case of food counters). For frozen food / raw materials used / handled, care should be taken so that the defrosted / thawed material is not stored back after opening.

**d. Food packaging :** Packaging material shall be stored in clean place/containers, free from pest/rodent infestation. Packaging material used for packing shall be made of food-grade material. It shall conform to Regulatory standards mentioned in FSSR 2011.

## AUDIT, DOCUMENTATION AND RECORDS

Periodic review of GMP and GHP systems shall be carried out to find gaps and corrective actions. Records of daily purchase, production / sales, raw material utilized (wherever applicable) should be made available.



Some examples of records maintained are raw material / product receiving, daily stock register, inward and outward details (to check FIFO), pest control, cleaning and housekeeping records, etc.

## SANITATION AND MAINTENANCE

**a. Cleaning and maintenance :** Routine cleaning of the floor, walls, roof, lofts, mezzanine shall be carried out to remove scrap, unwanted things, dust and cobwebs. Cleaning chemicals and tools like brooms or mops used for cleaning shall be stored away from the food material at a designated place. Cleaning chemicals shall be clearly identified, along with instructions for use. The containers used for storage or display like glass jars, plastic jars, plastic bins, and stainless steel tanks, etc. shall be dry clean frequently and washed on need basis.

**b. Pest control systems :** Pests generally taken into account are rodents, lizards, cockroaches, flying insects, ants, etc. Premises and equipment shall be kept in clean, good and repaired condition to avoid pest harbourage.

To control pests, adequate control measures shall be in place

- i. For insects – insect-killer, fly-catcher, fly-killer
- ii. For rodents and lizards – roda-box, rat trap
- iii. For cockroaches – glue/paste
- iv. For Ants – Pest control powders

The pest control chemical shall not contaminate the raw material or ready product, care shall be taken while using and storage.

All food materials shall be stored in pest-proof containers stacked above the ground and away from the walls.

## PERSONAL HYGIENE

**a. Health status :** Don't allow personnel in direct contact with food material to work if they have symptoms of illness, contagious disease, skin disease, or have cuts and burns.

**b. Personal cleanliness :** Personnel engaged in handling of open and loose food products (for e.g. flours, grains, fruits and vegetables, etc.) shall follow good hygienic practices viz.

- i. Wearing clean clothes [head gear and kitchen apron (wherever applicable)] and hand washing Maintaining hygienic personal behaviour

- ii. Avoid smoking, spitting, sniffing
- iii. Do not eat or drink in processing area
- iv. Avoid certain habits viz. scratching nose, running fingers through hair, scratching body parts, etc.

## LABELLING

FBO shall verify that the product he is packing or selling complies to labelling guidelines described in FSSR 2011 and has the following aspects :

- a. Name of product
- b. Ingredients
- c. Nutritional information
- d. Veg / non-veg logo
- e. Name and address of manufacturer
- f. Net quantity
- g. Lot / batch code
- h. Date of manufacture
- l. Best before' date, etc.

## TRAINING

Regular and effective training shall be provided to food handlers on topics like personal behaviour, personal hygiene, food safety during handling food, storage, FIFO etc.; and maintaining training records.

## AUDIT, DOCUMENTATION AND RECORDS

1. A periodic audit of the whole system according to the SOP shall be done.
2. Appropriate records of raw material receipt, stock of existing RM, production, storage, distribution, service, laboratory test results, cleaning and sanitation, pest control and product recall shall be kept.
3. The records shall be retained for a period of one year or till the shelf-life of the product, whichever is more.

**List of records as mandated under Part II of Schedule 4 of Food Safety & Standards (Licensing & Registration of Food Businesses) Regulations, 2011**

S.NO.	SECTION	SECTION NAME	CLAUSE	REQUIREMENT
1.	Part 2 Section 4	Facilities	4.1.3	Water storage tanks shall be cleaned periodically and records of the same shall be maintained in a register.
2.	Part 2 Section 5	Food operations and controls	5.1.3	Records of raw materials, food additives and ingredients as well as their source of procurement shall be maintained in a register for inspection.
3.	Part 2 Section 8	Audit, documentation and records	8.2	Appropriate records of food processing / preparation, production / cooking, storage, distribution, service, food quality, laboratory test results, cleaning and sanitation, pest control and product recall shall be kept and retained for a period of one year or the shelf-life of the product, whichever is more.
4.	Part 2 Section 9	Sanitation and maintenance of establishment premises	9.1.1	A cleaning and sanitation programme shall be drawn up and observed and the record thereof shall be properly maintained, which shall indicate specific areas to be cleaned, cleaning frequency and cleaning procedure to be followed, including equipment and materials to be used for cleaning. Equipment used in manufacturing will be cleaned and sterilized at set frequencies.

S.NO.	SECTION	SECTION NAME	CLAUSE	REQUIREMENT
5.	Part 2 Section 9	Sanitation and maintenance of establishment premises	9.2.3	Pest infestations shall be dealt with immediately and without adversely affecting the food safety or suitability. Treatment with permissible chemical, physical or biological agents, within the appropriate limits, shall be carried out without posing a threat to the safety or suitability of food. Records of pesticides / insecticides used along with dates and frequency shall be maintained.
6.	Part 2 Section 10	Personal hygiene	10.1.2	Arrangements shall be made to get the food handlers / employees of the establishment medically examined once in a year to ensure that they are free from any infectious, contagious and other communicable diseases. A record of these examinations signed by a registered medical practitioner shall be maintained for inspection purpose.
7.	Part 2 Section 10	Personal hygiene	10.1.3	The factory staff shall be compulsorily inoculated against the enteric group of diseases as per recommended schedule of the vaccine and a record shall be kept for inspection.



S.NO.	SECTION	SECTION NAME	CLAUSE	REQUIREMENT
8.	FSS Regulation	Condition of license	8	Maintain daily records of production, raw materials utilization and sales separately
9.	FSS Regulation	Condition of license	14	Manufacturer/importer/distributor shall buy and sell food products only from, or to, licensed/registered vendors and maintain record thereof.

## PRODUCT PACKAGING

Product packaging prevents contamination, allows food to be transported easily and extends shelf life. Packaging also provides a surface for labelling and identification of products. Packaging materials also need to ensure that food is not contaminated from substances that could migrate from the packaging into food.

The packaging material may be contaminated from physical hazard (such as dirt, hair etc.), chemical hazard (such as process ink, adhesive etc) and biological hazard (such as bacterial or fungal contamination). The food packaging material shall conform to all the Regulations and standards laid down under the Food Safety & Standard Act, 2006. For primary packaging, only Food grade packaging materials are to be used. The packaging materials or gases where used, shall be non-toxic and it shall not pose a threat to the safety and suitability of food. The packaging material should be free from contamination from physical, chemical and biological hazard.

### Packaging- General Requirements

1. A utensil or container made of the following materials or metals, when used in the preparation, packaging and storing of food shall be deemed to render it unfit for human consumption :

- Containers which are rusty
- Enameled containers which have become chipped and rusty
- Copper or brass containers which are not properly tinned
- Containers made of aluminum not conforming in chemical composition to IS: 20 specifications for Cast Aluminum and Aluminum Alloy for utensils or IS: 21 specifications for Wrought Aluminum and Aluminum Alloy for utensils.

2. Containers made of plastic materials used as appliances or receptacles for packing or storing food articles, whether partly or wholly, should conform to the following Indian Standards Specification viz. :

- IS: 10146 (Specification for Polyethylene in contact with foodstuffs)
- IS: 10142 (Specification for Styrene Polymers in contact with foodstuffs)
- IS: 10151 (Specification for Polyvinyl Chloride (PVC), in contact with foodstuffs)
- IS: 10910 (Specification for Polypropylene in contact with foodstuffs)
- IS: 11434 (Specification for Ionomer Resins in contact with foodstuffs)
- IS: 11704 Specification for Ethylene Acrylic Acid (EAA) copolymer
- IS: 12252 - Specification for Poly alkylenterephthalates (PET)
- IS: 12247 - Specification for Nylon 6 Polymer
- IS: 13601 - Ethylene Vinyl Acetate (EVA)
- IS: 13576 - Ethylene Metha Acrylic Acid (EMAA)
- Tin and plastic containers once used, shall not be re-used for packaging of edible oils and fats

Provided that utensils or containers made of copper though not properly tinned, may be used for the preparation of sugar confectionery or essential oils and mere use of such utensils or containers shall not be deemed to render sugar confectionery or essential oils unfit for human consumption.

## APPROVED ADDITIVES

There are various additives being used in different categories of food products. FSSAI has listed down all these additives which are approved in different food products respectively along with their limits of use.

Details regarding the same can be obtained from the following link: (<http://www.fssai.gov.in/home/Food-Safety-and-Standards-Regulations/Food-Safety-and-Standards-Food-Product-and-Standards-and-Food-Additives-Regulation-2011.html>)

## FOOD TESTING FACILITIES

A well-equipped laboratory for physical, microbiological and chemical analysis shall be in place inside the premise of establishment. In case of any suspicion or possible contamination, food materials shall be tested before dispatch by the Food Business Operator.

If there is no in house laboratory facility, then regular testing shall be done through an accredited lab notified by FSSAI. In case of complaints received and if so required, the Food Business Operator shall voluntarily do the testing either in the in-house laboratory or an accredited lab or

lab notified by FSSAI. As per the condition of FSSAI license – Food Business Operator shall ensure testing of relevant chemical and/or microbiological contaminants in food products in accordance with these regulations as frequently as required on the basis of historical data and risk assessment to ensure production and delivery of safe food through own or NABL accredited /FSSAI notified labs at least once in six months.



## SAMPLING OF FOOD PRODUCTS

Sampling refers to the statistical process of selecting and studying the characteristics of a relatively small number of items from a relatively large population of such items, to draw statistically valid inferences about the characteristics about the entire population.

### SCALE OF SAMPLING

**Lot :** All the containers in a single consignment of one type and grade of material drawn for a single batch of manufactures shall constitute the Lot.

**Gross Sample :** The general procedure for taking a gross sample is to draw a no. of portions from the bulk quantity or a no. of portions from all or several packages and, mix them thoroughly. Representative portions of the gross sample shall be transferred to air tight containers of suitable size for the test samples.

**Gross sample from bulk quantities :** shall be drawn in quantities of not less than 2 kg per 2000kg or less.

**Gross sample from small packages :** when sampling from drums, barrels, etc. the packages from which the samples are drawn shall be selected at random from the lot. The following schedule is recommended for the no. of packages to be sampled:

NUMBER OF PACKAGES IN THE LOT	NUMBER OF PACKAGES TO BE SAMPLED
1 to 4	Each package
5 to 100	At least 20% with a minimum of 4 packages
More than 100	At least 10% with a minimum of 20 packages

### GENERAL PRECAUTION IN SAMPLING

- All sampling instruments should preferably be made of Stainless steel.
- All sampling apparatus should be clean and dry when used.
- Samples should not be taken in an exposed place.
- Samples should be stored in a manner that they are protected from light, temperature fluctuation and other abnormal conditions.
- Sample containers should be filled such that the air space above the liquid level should be 5 to 10% of the capacity of the sample container.

## TESTING REQUIREMENTS FOR FOOD PRODUCTS

The testing requirements for different types of food material is listed down in the Food Safety & Standards (Food Product Standards) Regulation, 2011 (<http://www.fssai.gov.in/home/food-standards/fss-regulations.html>)

The basic quality parameters testing can be done at the site lab of the FBO, whereas parameters requiring sophisticated lab infrastructure and higher analytical expertise can be outsourced to FSSAI recognized / NABL accredited labs.

### Adulteration – The Need to Test

Ensuring the authenticity of food has been a problem for eras. Wherever there is a commodity that commands a quality in the market and has either high value or high-volume sales, some people may be tempted to profit from illegal activity. Food fraud usually involves misleading the purchaser as to the true nature, substance or quality of the goods demanded; thus, food standards and labeling are breached. The offence can take the form of adulteration, which generally involves the dilution of a commodity with less expensive materials. A cheaper food may also be represented as if it were a food of greater value.



Source

- <http://www.fssai.gov.in/Portals/0/Pdf/15Manuals/SAMPLING.pdf>
- <http://agmarknet.nic.in/adulterants.html>

## CONTAMINANTS AND TOXINS

### Safety Parameters : CONTAMINANTS

It is provided under the conditions of license as per FSSR licensing and registration regulations that every FBO shall ensure that his food product is tested for relevant chemical and microbiological contaminants through FSSA notified / NABL accredited or own laboratory at least once in six months.

The list of contaminants and toxins are given in detail under the Food Safety & Standards (Contaminants, Toxins & Residues) Regulation, 2011 on the following link:

<http://www.fssai.gov.in/home/food-standards/regulations/contaminants-toxins-and-residues.html>

## PRODUCT INFORMATION AND CONSUMER AWARENESS

All packaged food products shall carry a label and requisite information as per provisions of FSS Act, 2006 and Regulations made there under. (Please refer <http://www.fssai.gov.in/home/fss-legislation/fss-regulations.html>)

### MANNER OF DECLARATION

#### General Conditions

- Any information / pictorial device / graphic matter on label shall not be in conflict with the regulations
- Declarations shall be legible, conspicuous, clear, bold and in contrast to the background color

Height of Numerical in the Declaration-

S.NO.	NET QUANTITY	MINIMUM HEIGHT OF NUMERAL
1	Up to 50 g/ml	1 mm
2	Above 50 g/ml up to 200 g/ml	2 mm
3	Above 200 g/ml up to 1 kg/L	4 mm
4	Above 1 kg/L	6 mm

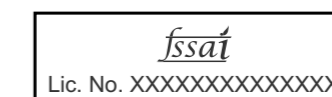
### Principal Display Panel (PDP)

- All information required under the regulation shall be given on the PDP of the package / container which shall be
- Grouped together and given at one place (applicable for pre-printed information also)
- Online information / those not pre-printed shall be grouped together in another place

### Labelling General Requirement

Every pre-packaged food shall carry a label containing information as required hereunder unless otherwise provided, namely -

- The particulars of declaration required under these Regulations to be specified on the label shall be in English or Hindi in Devanagari script; Provided that nothing herein contained shall prevent the use of any other language in addition to the language required under this regulation.
- Pre-packaged food shall not be described or presented on any label or in any labeling manner that is false, misleading or deceptive or is likely to create an erroneous impression regarding its character in any respect.
- Labels in pre-packaged foods shall be applied in such a manner that they will not become separated from the container.
- Contents on the label shall be clear, prominent, indelible and readily legible by the consumer under normal conditions of purchase and use.
- Where the container is covered by a wrapper, the wrapper shall carry the necessary information or the label on the container shall be readily legible through the outer wrapper and not obscured by it.
- License number shall be displayed on the principal display panel in the following format



### Labelling of Pre-packaged Foods

In addition to the General Labeling requirements specified above every package of food shall carry the following information on the label, namely :

- Name of the food

- List of ingredients in descending order
- Nutritional information
- Declaration regarding veg or non-veg
- Declaration regarding food additives
- Name and complete address of manufacturer or packer
- Net content by weight or volume
- Date of Manufacture / Packing
- Lot / Code / Batch identification
- Best Before Date
- Instructions for use
- Importer details and Country of origin for imported products

All the contents provided on the label must be clear, prominent, indelible and legible.

A label or the primary pack of a food article must carry the following declarations -

**1. The name of the food**, which includes the trade name or description of the food in the package. It should be provided in bold type, clear and in distinct contrast with the background.

**2. The ingredient or list of ingredients** : Ingredient listing must carry a proper title namely "Ingredients" and the ingredients must be listed in descending order of prominence in product composition.

**3. Nutrition information** : must be declared on the label in numerical terms per 100 gm or 100 ml or per serving of the food.

The information must include energy value (kcal), protein (gm), carbohydrate (along with sugar) and fat (gm), saturated fat, trans-fat, minerals and vitamins in metric units, nutrient for which a claim is made. When claim is made on amount or type of fatty acid or amount of cholesterol, the amount of SFA, MUFA, and PUFA (in gm), trans-fat (in gm) and cholesterol (in mg) needs to be declared.

**4.** If any food additives are used, the **class title of the food additive along with the INS number** as given in the rules must be given.

**5. The vegetarian logo** consisting of green-coloured filled circle within a square with green outline shall be declared on the package. This logo must appear close to the brand name and the dimensions must be as follows :

S.NO.	AREA OF PRINCIPAL DISPLAY PANEL	MINIMUM SIZE OF DIAMETER	MINIMUM SIZE OF THE SIDE OF SQUARE
1	Up to 100 sq.cm	3 mm	6 mm

S.NO.	AREA OF PRINCIPAL DISPLAY PANEL	MINIMUM SIZE OF DIAMETER	MINIMUM SIZE OF THE SIDE OF SQUARE
2	Above 100 sq.cm. upto 500 sq.cm.	4 mm	8 mm
3	Above 500 sq.cm. upto 2500 sq.cm.	6 mm	12 mm
4	Above 2500 sq.cm.	8mm	16mm

**6. Name and address** of the manufacturer and **complete address** of the manufacturing unit/premises.

**7.** Where the manufacturer is not the packer the **name and complete address of the packer** must be printed on the label.

**8.** Every Manufacturer and Packer address must carry the **valid License number**, with prefix : License No.

**9.** The Manufacturer License No. should be mentioned in the **FSSAI logo**.

For products manufactured at company plants, License No. would be that of the company manufacturing unit.

For products manufactured at third party location, License No. would be the company marketer's License No. and the manufacturing license of the manufacturing / packing unit.

For products manufactured / packed at third party location, name and address of manufacturing / packing company as well as of the company on whose behalf it is manufactured / packed shall be included on the label.

**10. The net quantity of the contents of the package** : the net content must be expressed in terms of standard units of weight or measure. Area above and below the declaration must be free of printed information by a space equal to at least the height of the numeral and the area to the right and left by a space of at least twice the height of the numeral.

**11.** In case of a food enriched with a mineral / vitamin or protein, **quantity of such enriched nutrient** shall be mentioned.

**12.** The **category** of the food.

**13.** The words "**proprietary food**" in case the food is proprietary.



**14. Best Before date :** the shelf life must be indicated with the words "BEST BEFORE ...MONTHS FROM PACKAGING / MANUFACTURE" (as appropriate).

**15.** A distinctive **batch number** with the prefix Lot / Batch / Code No.

**16. The date / month of manufacture / packaging of the product** along with year to be specified.

**17. The retail sale price** of the package of food must be declared in the format "MRP Rs. XX inclusive of all taxes".

**18. Name, address, telephone number and the e-mail address** if available of the person or office to be contacted in case of consumer complaints.

**19.** Height of the letter for all the declarations has to be minimum **1 mm**.

#### Nutritional information

Nutritional information is not necessary in case of raw agricultural foods / drinking water / single ingredients and bulk food.

When a claim is made on the amount or type of fatty acid or the amount of cholesterol, the amount of saturated fatty acids, monounsaturated fatty acids and polyunsaturated fatty acids in gm and cholesterol in mg should be declared. Along with this, the amount of trans-fatty acids in gm should also be stated.

Nutrition Information	
Amount per 100g of product	
Energy	#kcal
Protein	#g
Carbohydrates	#g
Sugars	
Fat	#g
Saturated fatty acids	#g
Polyunsaturated fatty acids	#g
Monounsaturated fatty acids	#g
Trans fatty acids	#g
Cholesterol	#mg



## PART IX

# FOOD SAFETY MANAGEMENT SYSTEM

- Introduction to FSMS
- Structure of the FSMS Program
- Self Inspection Checklist
- Flow Chart
- FSMS Plan
- Sample FSMS Plan for any Product Processing

## INTRODUCTION OF FSMS

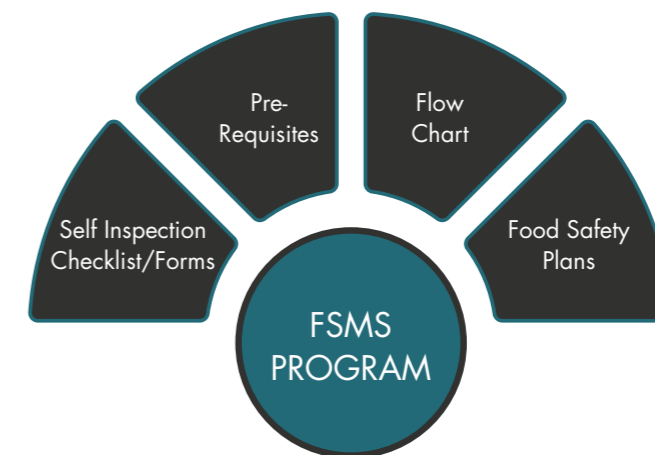
A Food Safety Management System (FSMS) is a network of interrelated elements that combine to ensure that food does not cause adverse human health effects. These elements include programs, plans, policies, procedures, practices, processes, goals, objectives, methods, controls, roles, responsibilities, relationships, documents, records, and resources.

The purpose of FSMS is to ensure the manufacture, storage, distribution and sale of safe food

There are five basic key elements of Food Safety Management System which are as follows:

- Good Practices/ PRPs
- Hazard Analysis /HACCP
- Management Element / System
- Statutory and regulatory requirements
- Communication

## STRUCTURE OF THE FSMS PROGRAM



## SELF-INSPECTION CHECKLIST

This is the first part to be taken care of while preparing a FSMS Plan. The Self-inspection checklist shall cover all the requirements given in Schedule 4 – Part 2 of this handbook. The compliance to the Schedule 4 requirements needs to be verified by the individual FBO with the help of this checklist (Ref. Manual of FSMS, FSS Act 2006 on FSSAI Website) to check whether the Food Safety Management System is in place and whether all the licensing conditions are complied with.



### FLOW CHART

- A flow chart is a list of the different steps involved. Below is an example of one in relation to processing of Edible oil
- Writing a flow chart is the second part of your FSMS
- This one below is an example of Khari (Baked Product) Processing :

### FSMS PLAN

Every manufacturing / processing unit should submit a Food Safety Management System Plan. It has to be developed based on Schedule – 4 of Food Safety and Standards Regulation, 2011 as given further in this handbook, in which general hygienic and sanitary practices to be followed by food business operators have been elaborated.

Along with sanitation and maintenance of establishment premises, personal hygiene of workers as well as personal cleanliness is also to be ensured by the FBO's.

The food safety plan shows :

- **Hazard :** What problems could happen
- **Control measures :** What you do to stop problems
- **Critical Limits :** What are the critical limits set for each control measure
- **Monitoring method :** How do you make sure that what you are doing stops the problem
- **Corrective Action :** What you do if something goes wrong
- **Records :** What records you keep

This has to be done for every step identified in your flowchart. FBO will need to complete a food safety plan as the third part of the FSMS.

### SAMPLE FSMS PLAN FOR ANY FOOD PRODUCT PROCESSING

OPERATIONAL SETUP	HAZARD	CONTROL MEASURE	CRITICAL LIMIT	MONITORING METHOD	CORRECTIVE ACTION	RESPONSIBILITY	RECORD

Problems can be caused by various physical, chemical and microbiological hazards. Sometimes allergens may also be considered as hazard to the product depending on the end product characteristics.

The above given example of FSMS Plan needs to be prepared / customized on the basis of process criticality and product characteristics. It will be different for each process and industry for which guidance of a Food Safety Expert is essential, who can help you in reviewing your PRPs, preparing flow chart, considering the probable hazards occurring at each step and preparing the FSMS Plan which is suitable for your industry.

