BASIC FOOD SAFETY TRAINING MANUAL CATERING



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Welcome to the manual -

The manual is designed for eating house, canteens and other catering businesses registered with FSSAI.

This manual explains General Requirements on Hygienic and Sanitary Practices to be followed by all Registered Food Business Operators engaged in catering/food service establishments, as per Food Safety & Standard Act, 2006.

This manual presents bare minimum requirements of Food Safety and hygiene to be followed by Food Business Operators along with Industry best practices.

Learning Outcome –

The objective of this manual is to train the personal that can be designated as Food Safety Supervisors in the Catering Establishment, about food safety and hygiene requirements which are to be followed in their businesses. The Food Safety Supervisors (FSS) may interpret these requirements according to the size and type of their establishment.

The desired outcome of this manual is better understanding of food safety and hygiene requirements and high standards of food safety in the catering industry.

What the law says -

In India, the mandatory sanitary & hygiene requirements for catering industry are –

"Part I 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).

PART I

INTRODUCTION TO FOOD SAFETY

Food safety & food safety hazards
Food spoilage

FOOD SAFETY& FOOD SAFETY HAZARDS

Food Safetymeans assurance that food is acceptable for human consumption according to its intended use.

Food Borne Diseases are the diseases caused due to consumption of a contaminated or spoilt food. Food borne disease is a serious problem that affects every country in the world. It can cause vomiting, diarrhea and fever, and in some cases it can be deadly.

Food borne disease can affect anyone, but some people are more at risk. For example, young children, the elderly, pregnant women and people who are unwell.

It is essential for all food handlers be cautious and prepares food safely to prevent consumers from food borne illnesses

Food Safety Hazardsmeans biological, chemical or physical agent in food, or condition of food, with the potential to cause an adverse health effect. There are majorly four types of hazards

There are three main types of food safety hazards



1. Microbiological (e.g. bacteria, fungi etc.)



2. Chemical (e.g. cleaning chemicals, pesticides, etc.)



3. Physical (e.g. broken glass, hair, etc.)

In catering and food service microbiological hazards are the most important.



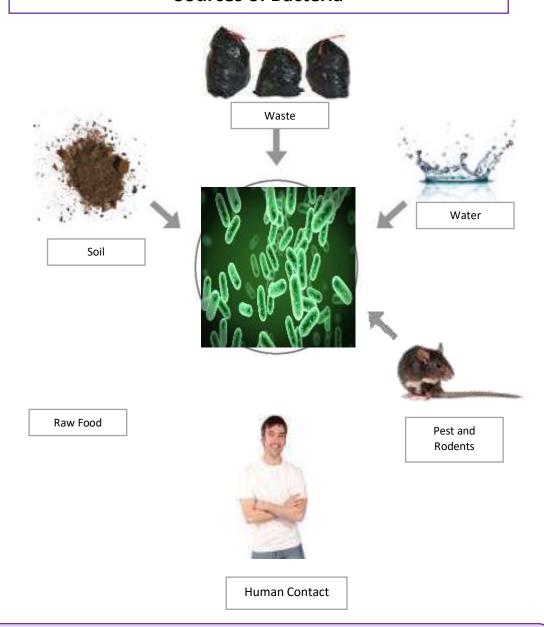
Bacteria are very small organisms that cannot be seen without amicroscope. Some types of bacteria are harmful to people and can cause food borne disease.

Raw Food





Sources of Bacteria

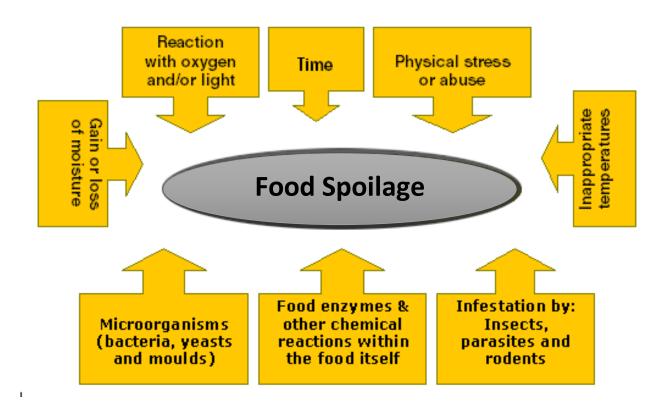


Bacteria can get into the food handling areas through various modes. These are soil, human contact, waste, contaminated water, pest, raw food items such as raw meat, eggs, and raw vegetables, etc.

FOOD SPOILAGE

Food spoilage means that the original nutritional value, texture, flavour of the food are damaged, the food become harmful to people and unsuitable to eat.

Major reasons for food spoilage are -



Activity 1

1. It is essential for all food handlers be cautious and prepares food safely to prevent consumers from food borne illnesses. True/ False

2. Three types of hazards are

a. _______ b. _____ c.

3. ______ are the main cause of food spoilage.

a. Bacteria b. Stones c. Hair

4. Food borne ______ results when a person consumes food contaminated by pathogens.

5. Food Safety is assurance that food is acceptable for human consumption according to its intended use. True/False

PART II

LOCATION, LAYOUT & FACILITIES

Location & surroundings
Layout & design of food establishment premises
Equipment & containers
Facilities

LOCATION & SURROUNDINGS

- Location of a catering establishment should be away from filthy surrounding in a sanitary place and shall maintain over all hygienic environment.
- All new units shall be set up away from environmentally polluted area.
- Potential sources of contamination like rubbish, waste water, toilet facilities, open drains an stray animals shall be avoided.



Dirty passage being used as Food Storage



Urinal without doors



Food Preparation area



Poor Civic Sense cause airborne bacteria



Garbage lying open - Source of Flies, Insects, Rodents





Open and unattended Garbage Bins

LAYOUT & DESIGN OF FOOD ESTABLISHMENT PREMISES

The designing of premises shall be such that there should be no cross contamination in food
preparation area occur from pre and post manufacturing operations. The material
movement should be done in one direction only (no backward flow), to prevent cross
contamination



The flow of food should be in forward direction

2. Floors, ceilings and walls of the catering establishmentmust be made of impervious material. They should be smooth and easy to clean with no flaking paint or plaster and maintained in a sound condition to minimize accumulation of dirt, condensation & growth of moulds

Floors, ceilings and walls -



Cleanable, durable, impervious to moisture



Cracks allow bacteria and molds to accumulate

- **3.** The **doors** in the catering establishment shall be made of smooth and non-absorbent surfaces and they shall be easy to clean and disinfectant.
- **4. Windows, doors & all other openings to outside environment** should be well screened with wire-mesh or insect- proof screen to protect the premise from pests.



5. There should be efficient **drainage system** and there shall be adequate provisions for disposal of refuse.



- **6.** The **surfaces of the Vending/ carts**, tables, awning, benches and boxes, glass cases, etc. shall be clean, hygienic, impermeable and easy to clean (like stainless steel), and placed at least 60 to 70 cm. from above ground.
- **7.** The vending surfacewhich comes in contact with food or food storage utensils shall be built of solid, rust/ corrosion resistant materials and kept in clean and good condition. They shall be protected from sun, wind and dust.



8. When not in use, food vending surface shall be kept in clean place and properly protected.

EQUIPMENT & CONTAINERS

- 1. The design of equipment, containers and Machinery
 - Do not use utensil made up of cadmium lead, non-food grade plastic and other toxic materials for cooking and storage.
 - Should permit easy cleaning to avoid accumulation of food particles and or microbes.
 - Should be made from stainless steel. Copper and brass utensils must have a proper lining.
 - All equipment and containers shall be kept clean, washed, dried and stacked at the close of business to ensure freedom from growth of mould/ fungi and infestation.
 - Containers used for storage should be closed with a lid.
 - All equipment shall be placed well away from the walls to allow proper inspection.
 - Store non-food items such as chemicals, etc. away for the food storage containers





Cooking containers with lids

Equipments made of corrosion free material



Storage containers with lids





Storage containers in the kitchen with lids

ACTIVITY -2

- 1. Brass utensils, when used shall be provided with lining. True/False
- 2. Windows, doors & all other openings shall be well screened with wire-mesh to protect the premise from
- a. personalsb. sunshinec. pestd. wind
- What are the requirements of ideal location?
 b.
- c. d.
- 4. Material movement is allowed in Direction.
- a. One b. bi
- c. Uni d. Multi
- 5. Equipment and containers for waste, by-products, cleaning chemicals and inedible or dangerous substances, shall be same. True/False





FACILITIES

The facilities required for producing and serving safe and hygeinc food include, water supply , utensils and equipment cleaning facilities, raw material washing facilities, potable ice and steam facilities, personnel facilities & toilets, proper ventiliation, air quality & lighting systems. The requirements are detailed as follows –

- 1. Continuous supply of potable water shall be ensured in the premises. Water filters maybe installed to ensure clean water supply.
- 2. In case of intermittent water supply, adequate storage arrangement for water used in food or washing shall be made.



Use water filter to ensure potable water is available for food preparation, cleaning and hand washing



3. Transporting of drinking water (treated water like bottled water, boiled/ filtered water through water purifier etc.) shall be in properly covered and protected containers and it shall be stored in clean and covered containers in a protected areaaway from dust and filth.

4. For Cleaning Utensils / Equipment adequate facilities for cleaning, disinfecting shall be provided with hot and cold water facility, if required.



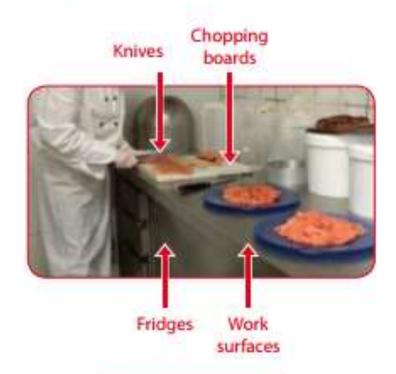
5. **For washing of raw materials,** there should be a separate sink for washing raw materials. The raw materials must be washed before storing.



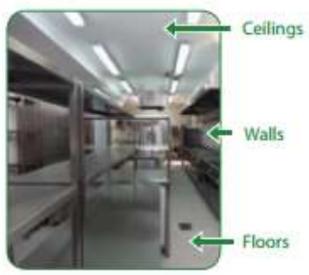
Separate sink with potable water facility for washing raw materials

Low and High Risk Cleaning









Some items and areas are 'high risk' because they come into direct contact with food or hands. They need to be disinfected to kill bacteria, whereas 'low risk' items and areas do not.

Cleaning and Disinfection



A cleaning product called a 'disinfectant' can kill bacteria if it is used correctly. The cleaning process must include washing (to remove grease), disinfection (to kill bacteria) and drying.

Other Disinfection Methods



Heat kills bacteria, so if a cleaning method uses very hot water (e.g. a dishwashing machine) the bacteria will all be killed.

This is another method of 'disinfection'.

6. **Ice and Steam** for use in production of food shall be made of potable water. They should be handled hygienically to avoid cross contamination. The ice shall be handled using food grade plastic scoop and the ice machine shall be kept clean at all times.

Handling Ice Machine





Clean & hygienic Ice Machine

Dirty Ice Machine

- 4. **Personnel facilities and toilets** are of major importance as the personnels are constantly in touch with the food. Proper hand washing facilities shall be provided. The requirements of a Hand washing and drying system include
 - ✓ Germicidal liquid Soap
 - ✓ Sanitizer
 - ✓ Supply of hot and /or cold water
 - ✓ Wet hands drying system
 - ✓ Clean and dry towels, preferably paper towel/rolls
 - ✓ Covered Trash Bin, preferably pedal operated with plastic lining





Also, separate adequate hygienic lavatories and changing facilities shall be provided for the personnel. The restroom and refreshments rooms shall be separate from food process and service areas to avoid personnel from having their food in restroom.



Ideally 1 tap for up to 15 people

- 5. **Air quality and ventilation system** shall be designed and constructed so that air does not flow from contaminated areas to clean areas.
- 6. **Lighting** should besufficient to the food establishment area. Lighting fixtures should be covered to prevent breakages of electrical fittings to contaminate food.



Lights shall be covered

Activity 3



- Only _____ water is used for food preparation.
- a. Potable b. Non-potable
- 2. We should wash, ______, dry chopping boards, knives etc.
- a. Steam
- b. Disinfect
- c. Clean
- 3. Its is preferable to use paper towels to clean knife and chopping boards. True/ False.
- 4. We should use hot water for dishwashing. True/ False.
- 5. Ice should be made from normal unfiltered tap water. True/False.

PART III

Food Production

Receiving

Storage

Pre-Preparation

Cross Contamination

Cooking

Reheating

Chilling

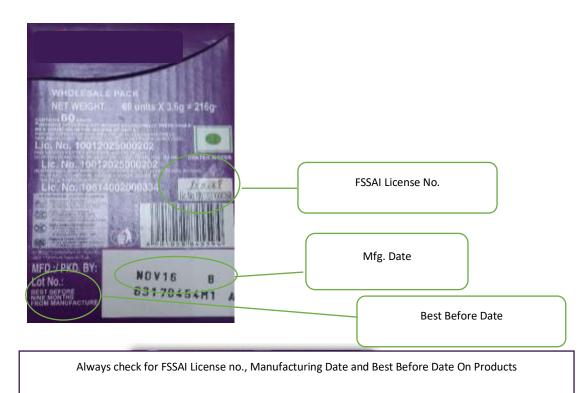
Distribution & Serving

Waste Disposal

RECEIVING

Procurement of raw materials -

- Ensure the receiving area is clean.
- Check for FSSAI License number on the products
- Check the temperature of delivered food-they must be same temperature as your storage temperature
- Use only grade A eggs, pasteurised milk products and meat from inspected source
- Do not buy/use cans that are dents and packages for leaks and tears.
- Check expiry/best before dates.
- Look for signs that frozen food has thawed and been refrozen
- Check produce for signs of spoilage, insect & dirt
- Check meat products for freshness (bright colour, no odour)
- Buy raw produce as per requirement and storage capacity to avoid food spilage and waste.





Checking Labelling requirements before receiving

Odor shall not be stale Body should not have wound or injury marks. The skin of fish should not break when pressed

FISH

Ventral portion shall be clean. Eyes must be crystaline and not smudged or slimy. Gills should be fresh when inspected preferably pink in colour

Special Focus before receiving



Should be Pinkish Rose in colour, No Green patches in body.

CHICKEN

Body should not have wound or injury marks, should not have excess slime formation on surface. The bird should not smell of any medicine. When we squeeze the animal water should not come out. Should check for authorised Government Stamp

Special Focus before receiving



Accept fish and marine products at below 5° C



Do not accept fish and marine products at above 5° C



Clean and intact



Do not receive broken & rotten eggs



Accept poultry products at/below 5° C



Do not accept poultry products above 5° C



Receive products in clean crates



Clean and sanitized trolleys for receiving raw material



Accept fresh produce with no sign of spoilage



Do not receive products in polythene



Unclean trolleys





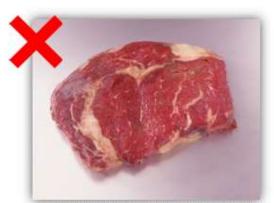
Accept meat products at/below 5° C



Accept dairy products at/below 5° C



Receiving of potentially hazardous food such as cooked meat at or above 65° C



Do not accept meat products above 5° C



Do not accept dairy products above 5° C



Receiving of potentially hazardous food such as cooked meat below 65° C



Accept packed product in intact and good condition



Reject packed product if they are torn or damped





Reject torn or leaking vacuum products



ACTIVITY- 6

- 1. Receiving temperature of frozen food should be 0° C or below. True/False
- 2. Receiving temperature of potentially high risk food should be at or below
- a. 10°C

b. 5° C

c. 7°C

- d. 15° C
- 3. Raw material or ingredient thereof shall be accepted if it is known to have -
- a. Good sanitary conditions
- b. Foreign Object

c. Parasite

- d. Pesticide
- 4. Every manufacturer, distributor or dealer selling an article of food to a vendor shall give either separately or in the bill, cash memo or label a warranty in
- a. Form E

b. Form D

. Form B

- d. Form A
- Packaged raw material must be checked for 'expiry date'/ 'best before'/ 'use by' date, packaging integrity and storage conditions. True/False

STORAGE OF RAW MATERIALS & FOOD

After receiving and accepting the raw material, there comes the need of storage. The storage facilities shall be designed and constructed to avoid cross - contamination during storage, permit adequate maintenance and cleaning and shall avoid pest access and accumulation. Cold Storage facility shall be provided for food that requires being stored below 5°C.

While procuring and receiving the raw material, the food handler shall ensure that -

- Frozen food must be stored at -18°C (0°F)
- Refrigerators & Refrigerated display units must be 4°C (40°F) or colder
- Dry storage areas should be from 10°C to 21°C (50°F to 70°F)
- Store raw and ready to eat/cooked food separately
- Never store raw food above ready to eat/cooked food.
- Keep food covered all the time
- Keep all foods labelled
- Rotate stock (FIFO- First in First Out and FEFO- First Expire First Out)
- Store all food 15cm(6 inches) off the floor to facilitate cleaning and deter pest.
- Keep packaging material covered to avoid contamination.



Store area should be ventilated and well- lit. All items are sorted and kept at their designated place. The flour is kept 15 cm above the ground.



Vegetarian and Non Vegetarian food are packed in clean packs/containers and stored in the segregated area.





Ensure all primary / secondary food packaging's and disposable service items are stored covered at all times

Separate Fridge is required for veg and non-veg food

If separate refrigerator is available: -

- Sequence in Veg Refrigerator Ready to eat and salad at the top shelve, cooked vegetables at next top shelves and raw vegetables at the lower shelves.
- Sequence in Non Veg Refrigerator Ready to eat and non-veg salad at the top shelve,
 cooked Non-Veg at next top shelves and raw Non-veg at the lower shelves.

If separate refrigerator is not available:-

Ready to eat and salad at the top shelve, cooked vegetables at next top shelves, Cooked Non-Veg in the next top shelves and raw food at the lower shelves



Raw Food & prepared food storage



Cold Store Temperatures Cold Storages at 1 to 5° C Vegetables & Fruits unto 9° C Frozen Foods at <-18° C Ice-Creamat <-12° C

Sequence of veg refrigerator				Sequence of non-veg refrigerator		
Top shelf	Ready to eat & veg salad			Fop shelf	Ready to eat & non veg salad	
Medium Shelf	Cooked vegetable		(A) (A)	Medium Shelf	Cooked non-veg	
Bottom Shelf	Raw vegetable		Make T	Bottom Shelf	Raw non-veg	

Activity 4



- We should check for FSSAI License No. on packaged food products. True/False.
- 2. FIFO is First In ______
- 3. Raw food should be stored above cooked food. True/False.
- We should only use food grade plastic for storing food products. True/False.
- 5. Food containers should be kept _____ cm above floor.
- a. 15 cm

b. 20 cm

Pre-Preparation

- 1. Wash all raw vegetables and fruits thoroughly in potable water.
- 2. All the equipment being used such as chopping boards, knives, peelers, processors etc. should be thoroughly clean.
- 3. Raw/ cooked food should be handled separate and separate equipment should be used.
- 4. Vegetarian and non-vegetarian food should be handled separate and separate equipment should be used.

Thawing of Food

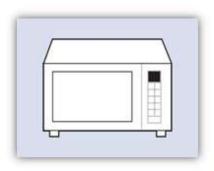
Thawing is a process of defrosting the frozen food. Thawing frozen food correctly is important for keeping food safe to eat. Thawed material should be consumed (Intend is processing) immediately. Do not store back thawed material for future use and only required portion of the food should be thawed at a time. The two most methods for thawing food -

Thawing-In Refrigerator

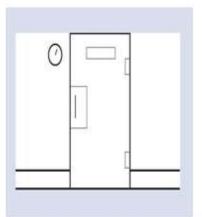
Place the frozen food in the perforated pan so that dripping should not contaminate the food. Place the perforated pan in a tray/pan so that food dripping accumulates in the tray/pan and it cannot drip on other food.

Thawing in Microwave Oven

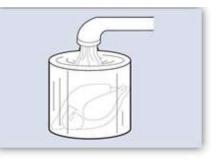
Only small portion of food should thaw by this method. A product is deemed to be thawed when core temperature lies between 1° C to 5° C. Use thawed product immediately.



In a microwave oven, if the food will be cooked immediately after thawing



In a refrigerator, at or below 5° C



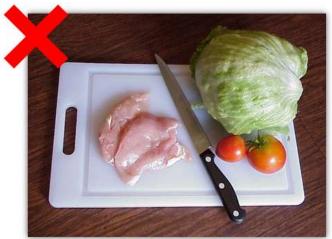
Submerge under running potable water, at or below 15° C

CROSS-CONTAMINATION

Cross contamination is one of the most common causes of food poisoning. It happens when harmful germs are spread onto food from other food, surfaces, hands or equipment.

Cross contamination may occur from -

1. Food to food



Do not handle veg and non veg products together.

2. Hand to food



Do not touch cooked food with hands

3. Equipment to food



Do not use same equipment for veg and non-veg food

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 should be thoroughly washed before switching from preparing non vegetarian products to any other activity.
- Work surfaces, chopping boards and equipment should be thoroughly cleaned (intend clean and sanitize) before the preparing of food starts and after it has been used.
- Separate chopping boards and knives for raw fruit/vegetables/ meat/poultry and ready-toeat food should be used.
- Raw meat/poultry below ready-to-eat food should be kept in the fridge.
- Separate fridge for raw meat/poultry should be kept.
- Staff should be made aware how to avoid cross-contamination.

CROSS- CONTAMINATION

Bacteria can easily spread from raw food (e.g. raw meat) onto hands, knives, chopping boards. equipment (e.g. fridges).

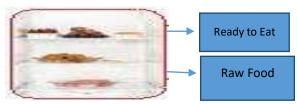




Hand, equipment and utensils must be thoroughly cleaned in between task.

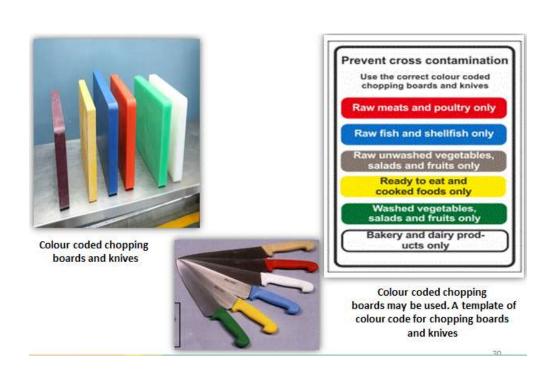
Raw meat must be kept separate from ready to eat food products





Raw meat must be kept separate from ready to eat food products

Raw meat can spread bacteria to ready-to-eat food (e.g. salad) unless it is kept separate at all times. Bacteria can be spread by contact with hands, utensils or equipment.





Separate storage of raw vegetables and non veg products

ACTIVITY- 5

- 1 Handling foods after using the toilet without first properly washing hands, may lead to
- a. pasteurization
- c. cross-contamination

- b. sanitation
- d. incubation
- 2. Cross contamination may occur from -
- a. Food to food
- c. Food handler to food

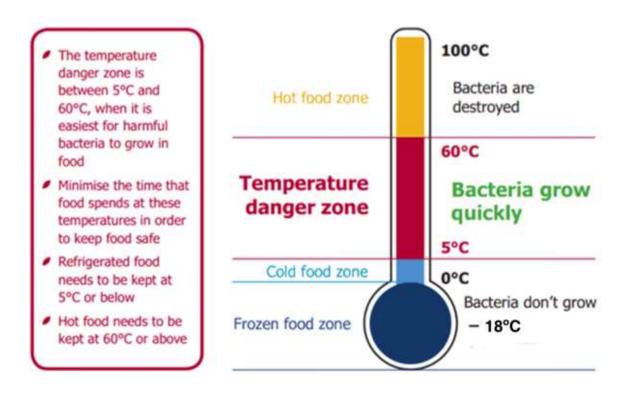
- b. Utensils to food
 - d. Customer to food
- 3. Raw meat and raw vegetables may be stored together. True/False
- As a good hygiene practise, seprate chopping board shall be used for handling raw vegetable and raw meat. True/False
- Hands should be thoroughly washed before switching from preparing non vegetarian products to any other activity. True/False



COOKING

Since harmful contaminants can't be seen, smelled or tasted, it's important that you cook your food to a safe internal cooking temperature to avoid food poisoning. The cooking process should be adequate to eliminate and reduce hazards to an acceptable level.

- The cooking must be done to reach a minimum internal temperature of 75° C.
- The cooking of veg. & non-veg. products should be segregated to avoid contamination.
- Fresh vegetable juices salads, etcshould be extracted at the time of order and not in advance. In case storing is require, refrigerate at 5°C or below in clean container



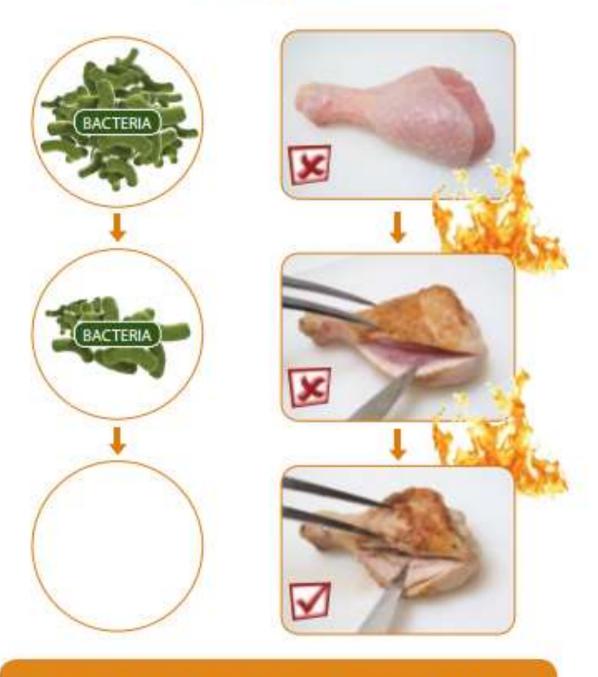
DANGER ZONE

Cooking Liquid-based Dishes



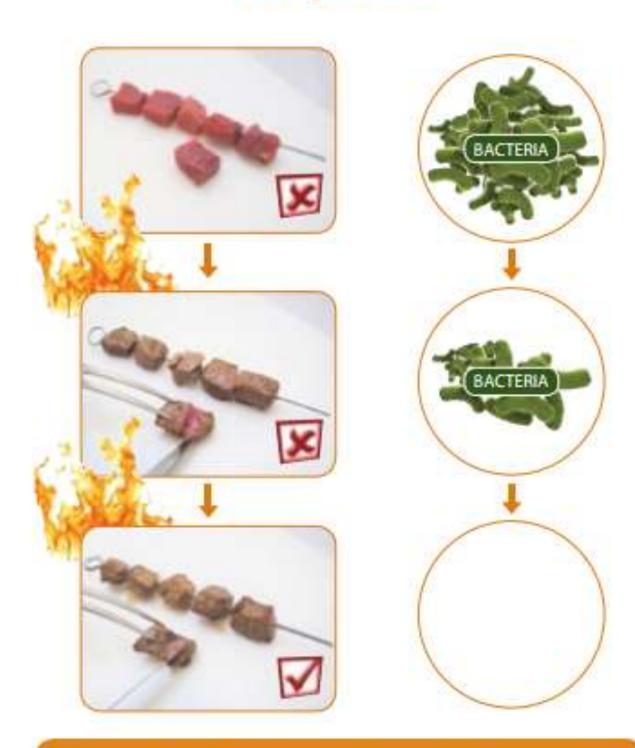
Heat kills bacteria. If food reaches a high enough temperature during cooking the bacteria will be killed. If a liquid item is boiling throughout then it has reached a safe cooking temperature.

Cooking Poultry



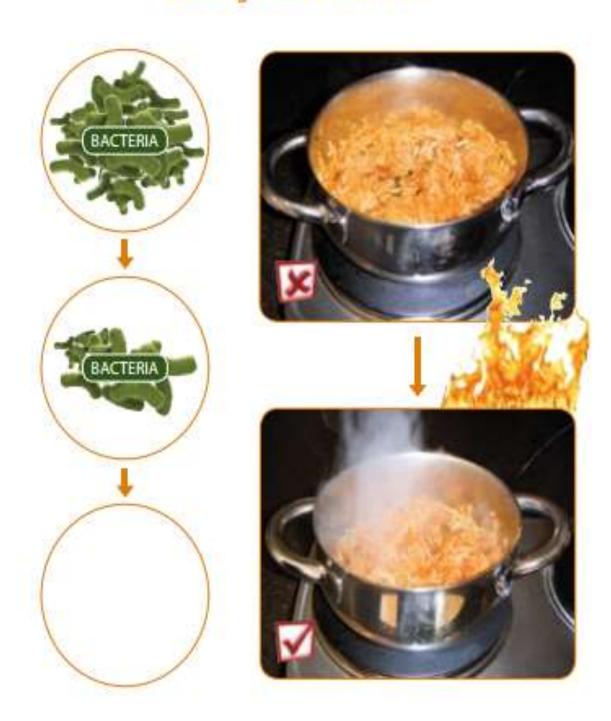
When cooking meat, there are colour changes to show that safe temperatures have been reached. White meat (e.g. chicken) must have changed from pink to white all the way through.

Looking Ked Meat



Red meat that has been chopped or minced (e.g. kebab meat, burgers) must have changed from red to brown all the way through.

Cooking Mixed Food Items



When cooking mixed food items (e.g. biryani), it must be steaming hot throughout to show that a safe temperature has been reached.

REHEATING OF FOOD

- When re-heating, food must get hot enough to kill bacteria.
- It must be bubbling / steaming throughout to show that a safe temperature has been reached.
- Reheated food can be hold at 60°C or more and discard any food that is reheated and being unused.

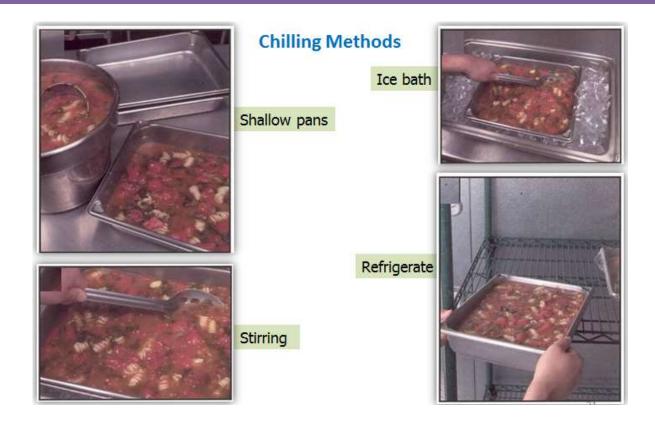


Microorganisms grow well in the temperature danger zone, i.e. 60° C to 5° C. Within this range, temperatures between 51 °C to 21°C allow for the most rapid growth of microorganisms. For this reason food must pass through this range quickly.



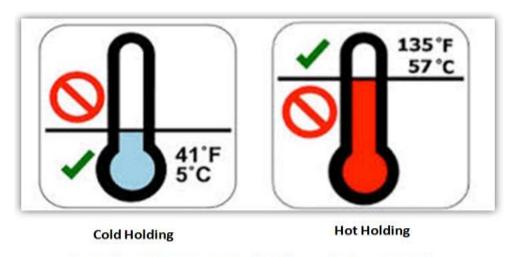


The best way of chilling is using blast chillers. If special equipment is not available, food should be chilled as quickly as possible using following methods:



HOT & COLD HOLDING OF FOOD

When hot-holding and cold-holding, food must be kept hot to stop bacteria from growing. Hot-holding equipment must be able to keep foods at a temperature of 60° C or higher and cold-holding equipment must be capable of keeping foods at a temperature of 5° C or colder.



Hot food shall be hot hold and cold food shall be cold hold

Activity 6



1.	Food should be cooked above microbes have been killed.	° C to ensure all
2.	Cold food should be kept below	° C
3.	Various method of chilling are	
a.		b
с		c
	Change in colour of poultry from pir lication of it being cooked properly.	nk to is an
5.	Leftovers can be reheated at	° C

FOOD PACKAGING

- Food packaging prevents contamination, allows food to be transported easily and extends shelf life. Packaging also provides a surface for labelling and identification of products.
- Use only food grade plastic for packaging of food.
- The packaging material should not be contaminated from physical hazard (such as dirt, hair etc), chemical hazard (such as process ink, adhesive etc.) & 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.



FOOD DISTRIBUTION/SERVICE

- 1. Processed / packaged and / or ready-to-eat food shall be **protected** as per the required storage conditions during transportation and / or service.
- 2. Handling of food should be minimal. It should be ensured that utensils, crockery, cutlery and specially hands of the food handlers/seller are clean and sanitized.



Keep pots & pans covered for hot foods



Stir hot and cold foods service to maintain temperatures

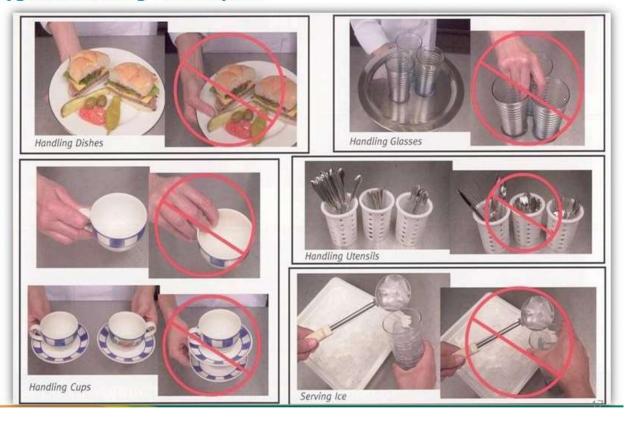






Chill service containers in refrigerator

Hygienic serving Techniques



WASTE DISPOSAL

- Waste storage shall be kept in covered containers.
- It shall be removed at regular intervals as per local rules and regulations.
- It shall be emptied and washed daily with a disinfectant and dried before next use.
- Waste disposal area shall be located away from food processing area to avoid contamination



Food waste and other waste materials shall be dumped periodically

PART VII PERSONAL HYGIENE

Personal cleanliness of food handlers is the most important link in preventing foodborne illness. These personal hygiene habits shall become a part of their behaviour.

- 1. All food handlers shall wear suitable clean protective clothing, head covering, face mask, gloves and footwear.
- 2. Food handlers shall always wash their hands with soap and clean potable water, disinfect their hands and then dry with hand drier or clean cloth towel or disposable paper.
- 3. Food handlers shall always wash their hands at the beginning of food handling activities immediately after handling raw food or any contaminated material, tools, equipment or work surface, where this could result in contamination of other food items or after using the toilet.
- 4. No Food handlers shall be engaged in smoking, spitting, chewing, sneezing or coughing over any food and eating in food preparation and food service areas.
- 5. The food handlers should trim their nails and hair periodically.
- 6. Food Handlers shall avoid certain hand habits such as scratching nose, running finger through hair, rubbing eyes, ears and mouth, scratching beard, scratching parts of bodies etc. When unavoidable, hands should be effectively washed before resuming work after such actions.
- 7. Street shoes inside the food preparation area should not be worn while handling & preparing food.
- 8. Food handlers should not handle soiled currency notes/cards to avoid cross contamination.

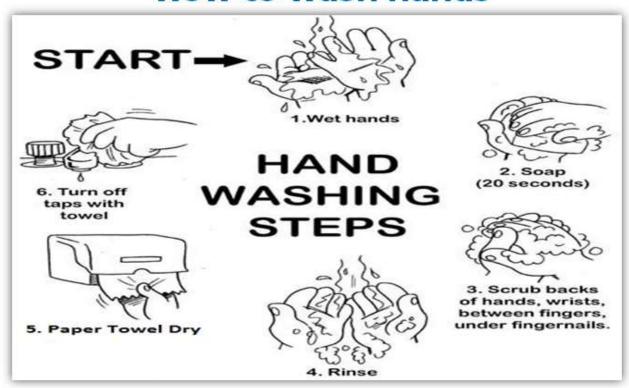


Basic requirements for personal hygiene -



Here's procedure for how to properly wash hands and when to wash hands.

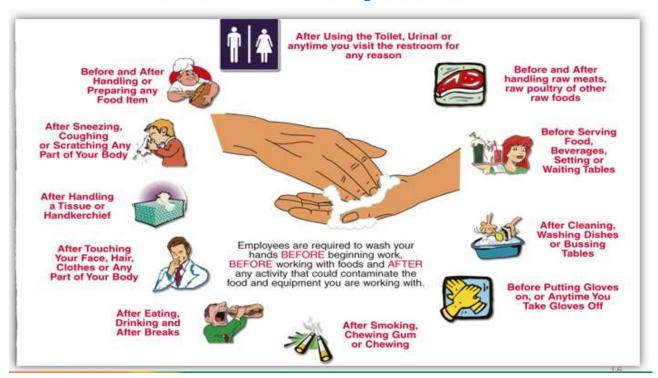
How to wash hands



How to wash hands



When to wash your hands



General Hygiene & Health of Food Handlers



General Hygiene & Health of Food











Food handlers shall avoid certain hand habits such as scratching nose, running finger through hair, rubbing eyes, ears and mouth, scratching beard, scratching parts of bodies etc.





No jewellery allowed



Nails should be trim with no nail paint



Hair should be trim with hair net



No perfume allowed



Cuts should be dressed



Open Cut being dressed



No mobile phone allowed

0

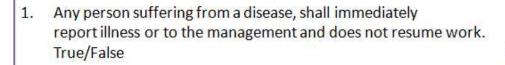
Visitor Policy: Visitors should be discouraged to enter the food production area. In case that is not possible, visitors should wear protective clothing and wash and sanitize hands before entering the food premises.

Employees must not work in food preparation areas if they have beensuffering from the following symptoms within the last 48 hours:

- Diarrhoea
- Vomiting
- Fever



ACTIVITY- 7





- Only specific personnel shall be compulsorily inoculated against the enteric group of diseases. True/False
- Visitors shall adhere to the personal hygiene provisions as mandate for Food handlers.
 True/False
- Street shoes are allowed inside the food preparation area while handling & preparing food. True/False
- All food handlers shall wear suitable clean protective clothing, head covering, face mask, gloves and footwear. True/False

PART VIII

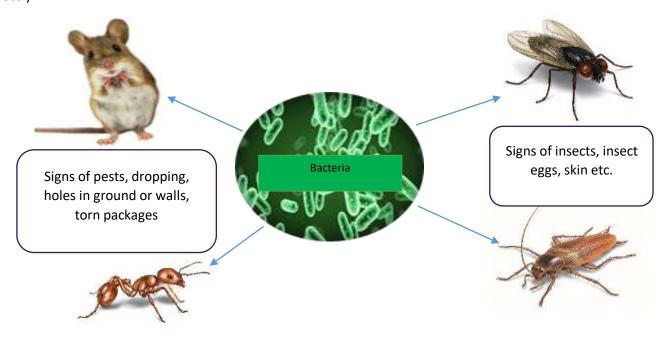
PEST CONTROL

PEST CONTROL

A pest is any living organism that causes damages or discomfort, or transmits or produces diseases.

The Major Pest includes -

- 1. Cockroaches
- 2. Rodents (mice, rats, squirrels etc.)
- 3. Flies
- 4. Stored product pests (Flour beetle, sawtooth grain beetle, cigarette beetle, indianmeal moth etc.).



Pests carry and spread bacteria. They must be prevented from getting into any food storage or handling area, for example by checking deliveries and removing waste regularly.

Pest Control Measures

- Screen doors and windows to keep flies out
- Fill in all holes, in the premises
- Check deliveries for infestations
- Eliminate water and food sources, fix leaky faucets and do not leave water in sinks or buckets
- Rotate stock, use FIFO
- Keep food covered

- Keep garbage covered
- Get pest control done by professional agencies only.
- Never spray chemicals while food is present in the kitchen

Some of the potential sources of pest entrance



Some of the pest control methods (4 D's Approach)



Deny entry





Deny food



Destruction



Deny shelter

Some of the pest control methods



·Rat cage protected by steel frame



·Glueboard for insect trapping in production ·maintain 1.5m radius gap



·End seal for pipelines not in use



 Insectocutor used outside production area ·maintain 3m radius gap



·Tamper resistant bait station secured onto ground

·hook up baits



·Mesh and grit for drainage

Some of the pest control methods



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

Activity 8



- 1. Signs of pest infestation are ______.
- 2. List 2 measures to control pest infestation
- a. ______ b._____.
- 3. We should always get pest control done from a professional and never do it ourselves. True / False.
- 4. We should never spray insect repellents or any other chemicals while food is kept in the kitchen. True / False.