



The Safe Food Handler

ServSafe Starters

What causes foodborne illness?

- Food from unsafe source
- Inadequate cooking
- Improper holding temperature
- Contaminated equipment
- Poor personal hygiene

Foodborne illness

- *Created by eating contaminated foods or beverages*

What food causes illness?

- Any food can cause foodborne illness -- even non-potentially hazardous foods.
- Potentially hazardous from the Environment:
 - Biological Hazard
 - Chemical Hazards
 - Physical Hazards

Some come from the environment, and others happen when people don't handle food the right way!



Food Safety is Important

- Good Personal Hygiene
- Controlling Time and Temperature
- Preventing Cross-Contamination
- Cleaning and Sanitizing

Basics of Handwashing

1. **Handwashing sink** – water at 100°F
2. **Hand soap** -- liquid, powder, or bar and does not have to be antibacterial
3. **Way to dry hands** --disposable towels, continuous towel system, or a hand dryer
4. **Instant hand antiseptic** -- not required



How to Wash Your Hands



- Wet hands and arms.
 - Use running water as hot as you can comfortably stand.



- Apply Soap.
 - Apply enough to build up a good lather.

Con't

How to Wash Your Hands



- Scrub hands and arms vigorously.
 - Scrub them for 10 to 15 seconds. Clean under fingernails and between fingers.



- Rinse hands and arms thoroughly.
 - Use running water.

Con't---

How to Wash Your Hands



- Dry hands and arms.
 - Do **NOT** use your apron or any part of your uniform. Use a single-use paper towel or a warm-air hand dryer.

After Washing Your Hands



- Use a paper towel to turn off the faucet.



Use a paper towel to open the restroom door.

Always wash hands:

- After using the bathroom
- After coughing, sneezing, smoking, eating, or drinking
- After clearing tables or busing dirty dishes
- Before putting on gloves
- After touching clothing or aprons
- After handling money
- Handling raw meat, poultry, or seafood (before & after)
- After handling garbage or trash
- After handling dirty equipment or utensils;
- During food preparation.
- Touching anything else that may contaminate your hands.

Stocking the Handwashing Sink

What is wrong in the picture?

What items should be stocked in a handwashing sink?



Where to Wash Your Hands

Wash your hands only in a designated handwashing sink.

- ✓ Warm running water
- ✓ Soap
- ✓ Single-use paper towels
- ✓ Garbage container



Do not **USE** handwashing sinks for other things.

- **NEVER** dump dirty water
- **NEVER** prep food
- **NEVER** stack food, equipment, or supplies in them or in front of them.

Use Gloves the Right Way

- Use the Correct Gloves – use single-use gloves when handling food.
- Make sure the gloves fit your hands.
- **NEVER** rinse, wash, or reuse gloves.
- Wash your hands before putting on gloves and when changing to a new pair.



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Use Gloves the Right Way

- Change gloves:
 - As soon as they become dirty or torn
 - before beginning a new task
 - after handling raw meat, fish, or poultry
 - Before handling ready-to-eat food
 - At least every four hours during continual use
 - More often if necessary



Bare-hand Contact

- No bare-hand contact of ready-to-eat food
- Ready-to-eat food (RTE) includes:
 - Cooked food
 - Raw fruits and vegetables
 - Baked goods
 - Dried sausages
 - Canned food
 - Snack foods
 - Beverages



Hands and Fingernails

- Fingernails (real or artificial) and nail polish can be physical hazards.
- Keep nails trimmed and filed.
- Employees cannot wear **fingernail polish** or **artificial fingernails**.

Cover cuts, wounds, and sores

- Do not handle food if you have a sore that contains pus or that is infected.
- Cover affected area with a bandage, a finger cot, and then a single-use glove.



Employee Clothing

Clothing can be a source of contamination so wear:

- an appropriate hair restraint
- clean clothing

While preparing food, do not wear jewelry

- This includes medical information jewelry on arms and hands.
- The only exception is a plain wedding band.

Employee Clothing - What to Wear

Hair Covering: Always wear a clean hat or other hair covering

Clothing: clean clothes every day.

Aprons: Remove aprons and store them in the right place when leaving prep areas.

Jewelry: Remove jewelry from hands and arms

* Do **not** wear:

Rings (except for plain metal band)

Bracelets, including medical bracelets

Watches.



Where You Can Eat....



Only eat, drink, smoke, or chew gum or tobacco in designated areas.

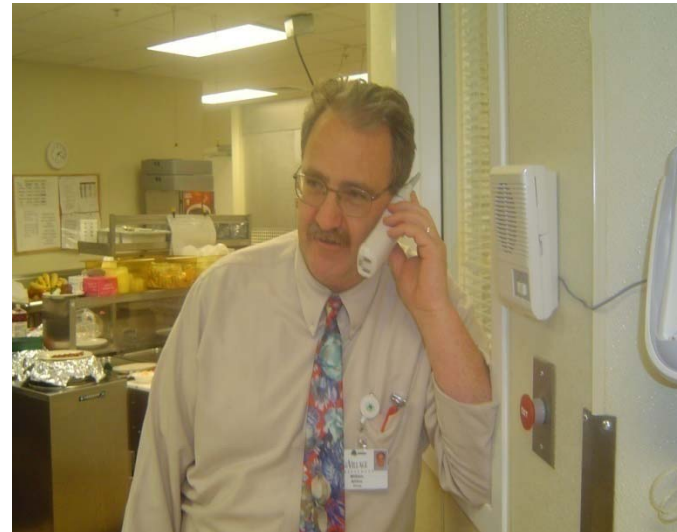
NEVER do these things:

- ✓ **never** eating in prep areas
- ✓ **never** eating in service areas
- ✓ **never** eating in areas used to clean utensils and equipment

Reporting Illness

If you are sick, you could spread pathogens to food. Don't let this happen. If you have these symptoms, report it to your manager:

- Vomiting
- *Diarrhea*
- *Jaundice (yellowing of skin and eyes)*
- *Sore throat with a fever*



Other Policies

When handling food,
never:

- smoke
- chew gum
- eat food

You can drink from a
covered container with a
straw. Store on a non-
food prep surface.





Activity

Food Handler -- Right or Wrong?

Food Handler -- Right or Wrong?



Food Handler -- Right or Wrong?



Food Handler -- Right or Wrong?



Food Handler -- Right or Wrong?





Controlling Time and Temperature



Photography

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Photography

Time and Temperature Control for Safety

TCS Food



- Milk, dairy products, eggs



- Meat: beef, pork, lamb
- Poultry



- Fish, shellfish and crustaceans

TCS Food

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- Baked Potatoes
- Heated-treated plant food (cooked rice, beans, vegetables)
- Tofu or other soy protein
- Sliced melons
- Cut tomatoes
- Sprouts and sprout seeds
- Untreated garlic-and-oil mixtures





“Looking does not guarantee proper cooking.”

Measure the temperatures of food during cooking, holding, and when leftover

How to Measure the Temperature of Food

1. Thermometers

- use the right thermometer for the job you are doing.

Can be used in roasts, casseroles, and soups



Good for measuring temperatures of thick and thin foods

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How to Measure the Temperature of Food

2. Make sure the thermometer is ready to be used.
 - Washed, rinsed, and sanitized before using it.
 - Adjusted in order to read correct temperatures : calibration
3. Check temperatures the right way
 - Stick the thermometer into the thickest part of the food.
 - Wait until the thermometer reading stays steady
 - Take another reading in a different spot
4. Clean and sanitize the thermometer
 - Wash, rinse, sanitize, and air-dry the thermometer after using it.

Checking Your Thermometer

Check the accuracy of all food thermometers:

- at least once a day
- every time it is dropped
- after being exposed to extreme temperatures

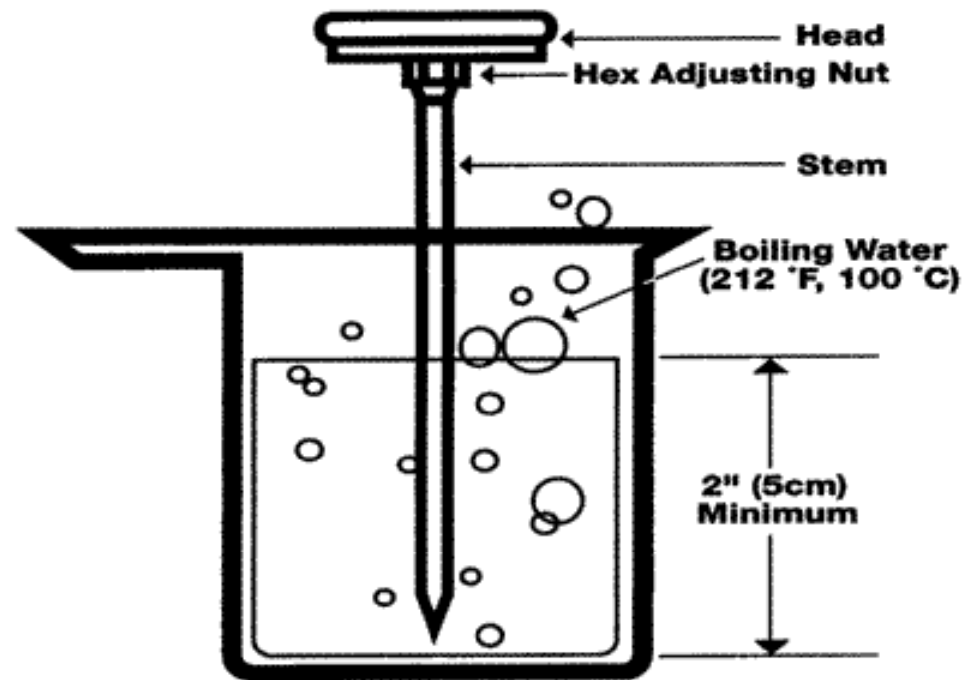
Methods to check the accuracy:

- Boiling water method
- Ice-point method

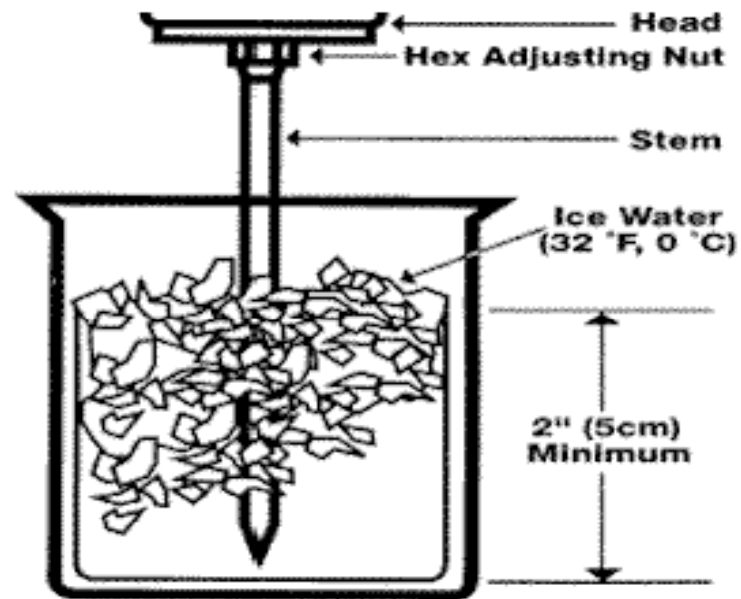
If not correct, calibrate.



Boiling Water Method



Ice-Point Method

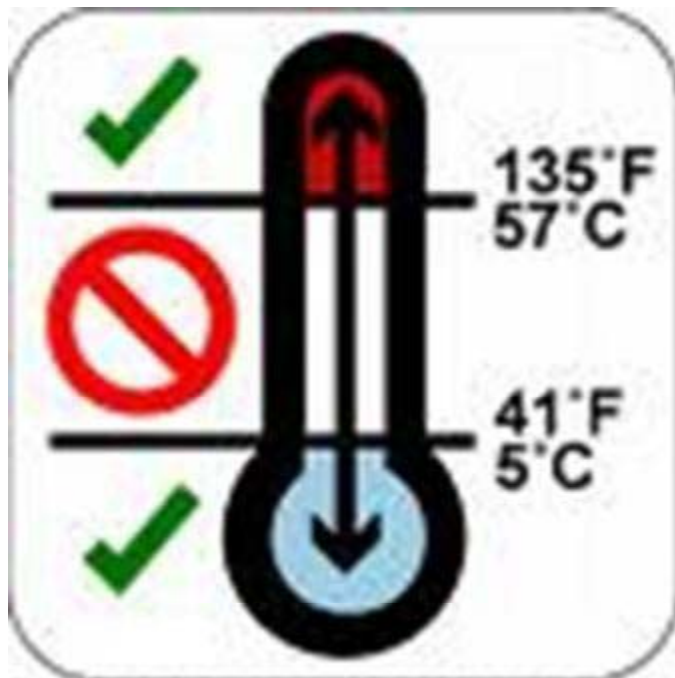




Holding and Storing TCS Food

- Temperature Danger Zone
- Holding TCS Food Safely
- Storing TCS Food Safely

Temperature Danger Zone



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Pathogens survive and grow

TCS food must be kept out of this range.

Holding TCS Food Safely

- Keep hot food at 135°F (57°C) or higher.
- Keep cold food at 41°F (5°C) or lower.
- Keep frozen food frozen.
- Check the food's temperature at least every four hours.
- If food is not being held at the right temperature, let your supervisor know.

Storing TCS Food Safely

- Do NOT overload coolers or freezers.
- Return prepped food to coolers as quickly as possible.
- Plan, ahead so you don't have to open cooler doors more than necessary.

How to Label Food for Storage

- Labeling: To control storage time, you must be able to tell when food was stored and by what date it must be used.
 - Ready-to-eat Food
 - Name of the food
 - Use-by or expiration date
- When storing food:
 - Check the expiration date
 - FIFO

Cross-Contamination

- Indirect bacterial contamination (infection) of food, caused by contact with an infected raw food or non-food source such as clothes, cutting boards, knives.
- Food to Food
 - In a refrigerator, meat drippings from raw meat stored on a top shelf might drip onto cooked vegetables placed on lower shelf.
 - Raw chicken placed on a grill touching a steak that is being cooked.

Cross-Contamination

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- People to Food
 - Handling foods after using the toilet without first properly washing hands.
 - Touching raw meats and then preparing vegetables without washing hands between tasks.
 - Using an apron to wipe hands between handling different foods, or wiping a counter with a towel and then using it to dry hands.

Cross-Contamination

Con't

- Equipment to Food
 - Using unclean equipment, such as slicers, can openers, and utensils, to prepare food.
 - Using a cutting board and the same knife when cutting different types of foods, such as cutting raw chicken followed by salad preparation.
 - Storing a cooked product, such as a sauce, in an unsanitized container that previously stored raw meat.

Cross-Contamination

Con't

How to Prevent Cross-Contamination When Storing Food

- ✓ Wrap or cover food before storing it.
- ✓ Store food only in containers intended for food.
- ✓ Store ready-to-eat food above raw seafood, meat, and poultry.
- ✓ Store food only in designated food-storage areas.
- ✓ Store food and nonfood items away from walls and at least six inches (15 centimeters) off the floor.

Cross-Contamination

Con't

How to Prevent Cross-Contamination When Serving Food

- ✓ Do NOT touch the parts of dishes or glassware that come in contact with food.
- ✓ Do NOT stack glasses when carrying them.
- ✓ Do NOT hold utensils by the parts that come in contact with food.
- ✓ Do NOT use bare hands to handle ready-to-eat food.
- ✓ NEVER scoop ice with your bare hands or a glass.
- ✓ NEVER use towels for cleaning food spills for any other purpose.
- ✓ **NEVER** store towels in your apron or uniform pocket.

Cross-Contamination

How to Prevent Cross-Contamination When Serving Food

- ✓ **NEVER** use the same utensils when handling:
 - ✓ Ready-to-eat food and raw meat, poultry, or seafood.
 - ✓ Different food items.
- ✓ Use separate utensils when serving different food items.
- ✓ Store serving utensils in food with the handles extended above the rims of the containers.

How to Prevent Cross-Contamination in Self-Service Area

- ✓ Make sure that food is labeled.
- ✓ Do **NOT** let customers refill their dirty plates.
- ✓ Do **NOT** let customers use dirty utensils.
- ✓ **NEVER** use ice that was used to keep food or beverages cold for anything else.

Con't

Cross-Contamination

Preventing Cross-Contamination when Storing Utensils and Equipment

- ✓ Store utensils and equipment that touches food at least 6” off the floor.
- ✓ Store glasses and cups upside down on a clean and sanitized surface.
- ✓ Store utensils with handles up.
- ✓ The same is true for nonfood items such as napkins, plastic forks and knives.

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Cross-Contamination

What to Do if Cross-Contamination Happens

- ✓ Do YOUR best to fix the problem.
- ✓ Set aside the contaminated item so no one can use it.
- ✓ Ask you manager what to do.

Food Allergies

Some people are allergic to certain types of food.

The Most Common Food Allergens

- ✓ Milk and dairy products
- ✓ Eggs
- ✓ Fish and shellfish
- ✓ Wheat
- ✓ Soy and soy products
- ✓ Peanuts and tree nuts, such as pecans and walnuts.

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Food Allergies

Some people are allergic to certain types of food.

How to Keep Customers with Food Allergies Safe

- ✓ Inform the customer how each dish is made with any “secret” ingredients.
- ✓ Suggest simple menu items

How to prepare food for Customers with Food Allergies Safe

- ✓ Make sure the allergen does not touch anything for the customer
- ✓ Wash, rinse, and sanitize cookware, utensils, and equipment
- ✓ Wash your hands and change glove



Cleaning and Sanitizing

How and When to clean and sanitize

Sanitizing

- Sanitizing is the process of reducing the number of microorganisms that are on a properly cleaned surface to a safe level.
- Sanitizing agents only work on properly cleaned and rinsed surfaces.

Methods for Sanitizing

Heat

- Hot water – 171°F or 180°F

Chemicals

- Chlorine – 50 ppm
- Quaternary Ammonia – 200 ppm
- Iodine – 12.5 ppm

Clean and Sanitize

Cleaning is the process of removing food and other soils.

- All surfaces
 - walls
 - storage shelves
 - garbage containers
- Any surfaces that touches food
 - knives
 - stockpots
 - cutting boards



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Clean and Sanitize

❖ How to Clean and Sanitize

- ❖ Clean the surface
- ❖ Rinse the surface
- ❖ Sanitize the surface
- ❖ Allow the surface to air-dry



❖ When To Clean and Sanitize

- ❖ After each use
- ❖ Before starting different type of food
- ❖ Anytime as necessary
- ❖ After 4 hours in use.

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Clean and Sanitize

- ❖ How to use the sanitizer effectively
 - ❖ The right temperature of water
 - ❖ The right amount of sanitizer
 - ❖ Check the sanitizer's strength
 - ❖ The right amount of time being sanitized



Storing Chemicals

- Improperly stored chemicals can possibly contaminate food.
- Store separate from food, equipment, utensils, linen, and single-service and single-use items.
- If removed from their original package, label the container in which they are stored.



Three-compartment sink

1. Sink 1 -- Water / water temperature at least 110°F
2. Sink 2 -- Rinse / Fill with water. Leave the sink empty if you spray-rinse items.
3. Sink 3 -- Sanitize / Hot water temperature of 171°F to 180°F or chemical solution of 50 ppm
4. Air – dry -- Do not hand dry

Never mix chemical sanitizers with washing water detergents



Dish machines

Water pressure must be correct for all dish machines.

High temperature machines

- Final sanitizing rinse must be 180°F or hotter
- Measure water temperature at the manifold

Chemical sanitizing machines

- Wash water 120°F or hotter
- Rinse water 75°F to 120°F
- Use the recommended sanitizer
- Follow the manufacturers instructions



Con't

Maintenance of Dishwashers

Cleaning and Maintaining

- Clear spray nozzles and food traps
- Fill tanks with clean water as needed.
- Fill detergent and sanitizer dispensers
- Remove mineral deposits using a delimer as needed.

How to use

- Scrape, rinse, or soak items before washing
- NEVER overload the dish racks
- Use the right rack
- NEVER use a towel to dry items
- Frequently check water temperature and pressure
- Change the water when necessary



Storing Cleaned and Sanitized Items

- In clean, dry location
- Not exposed to splash, dust, or other contamination
- At least 6 inches above the floor
- In a self-draining position
- Covered or inverted





Receiving

How to Be sure the Food You Receive is Safe

Inspect before You Accept

Spot check delivery vehicles for cleanliness and proper temperature control.

- Checking food as follow:
 1. Temperature
 2. Quality
 3. Packaging



Temperature

- Receive cold food at 41°F or lower
 - Follow the temperature listed by the manufacturer.
- Frozen food should be received frozen.
 - Reject it if you see these on the product or packaging:
 - Fluids
 - Water stains
 - Ice Crystals
- Receive hot food at 135°F or higher

Quality

- Reject food if it:
 - Has an abnormal color
 - Smells wrong or unpleasant
- Reject meat, seafood, or poultry if it:
 - Is slimy sticky, or dry.

Packaging

- Clean and in good condition
- Reject food if ---
 - Boxes are broken.
 - Cans are swollen or dented.
 - Packaging is damp, water stained, or leaking.
 - Signs of pests.
 - Expired the use-by date



Storage

How to Be sure the Food You Store is Safe

Types of Storage

- Refrigeration
- Freezer
- Dry storage
 - Food
 - Cleaned and sanitized utensils and equipment
 - Chemicals



First In, First Out (FIFO)

- Storing food that will expire first in front of items that will expire later.
- FIFO ensures proper rotation of foods in storage.
- When foods are received, put the oldest in the front and the newest in the back.
- Identify package date, preparation date, or date of purchase. Mark with Month/Year before products are placed in storage.

Cross-contamination in Storage

- Bacteria can be transferred from one food to another if food is not properly stored.
- Properly cover foods except while hot food is being cooled.
- Store raw food below cooked or ready-to-eat food.



Temperature of Storage Units

Refrigeration

- Must keep food at 41°F or colder
- Air temperature should be 39°F or colder

Freezer

- Must keep food at 0°F or colder
- Air temperature should be 0°F or colder

Dry storage

- Best if temperature is between 50°F and 70°F
- Humidity level should be between 50% and 60%

Storage Containers

- Food that is removed from its original package must be stored in a durable storage container.
- All containers must be food-grade.
- The container must be identified with the common name of the food unless it is unmistakably recognized.





Preparation

How to Be sure the Food You Prepare is Safe

Thawing TCS Food

- Improperly thawed food can support the growth of bacteria.
- Safe methods of thawing are:
 1. in a cooler 41°F (5°C) or lower
 2. during cooking
 3. in the microwave oven followed by cooking
 4. under cold, running water 70°F (21°C)

Cooking Temperatures

Food	Minimum Temperature
Poultry including ground chicken and turkey	165°F
Stuffing, stuffed foods, and casseroles	165°F
Ground meats and eggs	155°F
Pork, beef, veal, lamb, and fish	145°F
Commercially processed foods	135°F
Cooked plant foods	135°F

Cooling Potentially Hazardous Foods

Properly cool potentially hazardous food by:

- reducing quantity to smaller container
- using an ice water bath
- putting food into a blast chiller
- Stirring



Cooling Process

1. Cool cooked food within two hours from 135° F to 70° F
2. Then cool it to 41°F or colder in the next 4 hours.

Cooling Potentially Hazardous Foods

Document on the daily log.

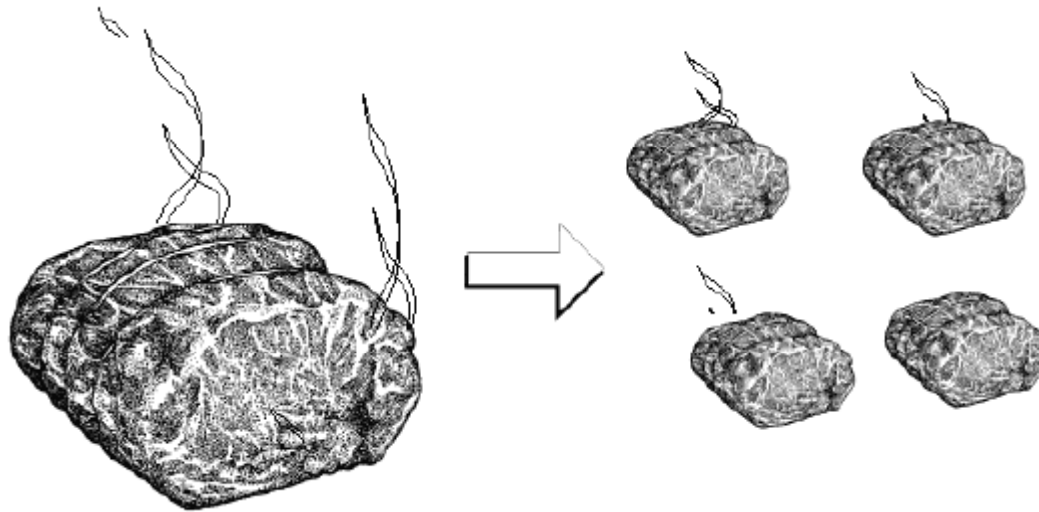
Date	Product	Start/End Time and Temperature				Corrective Action Taken	
		Start Time Start Temp	Observer(s) Initials	End Time End Temp	Manager Initials	1	2

Start/End Time and Temperature: Note the time and temperature when the cooling process begins. Note the time and temperature when the Manager/last person leaves the facility for the day. If it is not evident that the food will cool to 41 degrees within an acceptable amount of time, discard the food and record a 1 or 2 in corrective action.

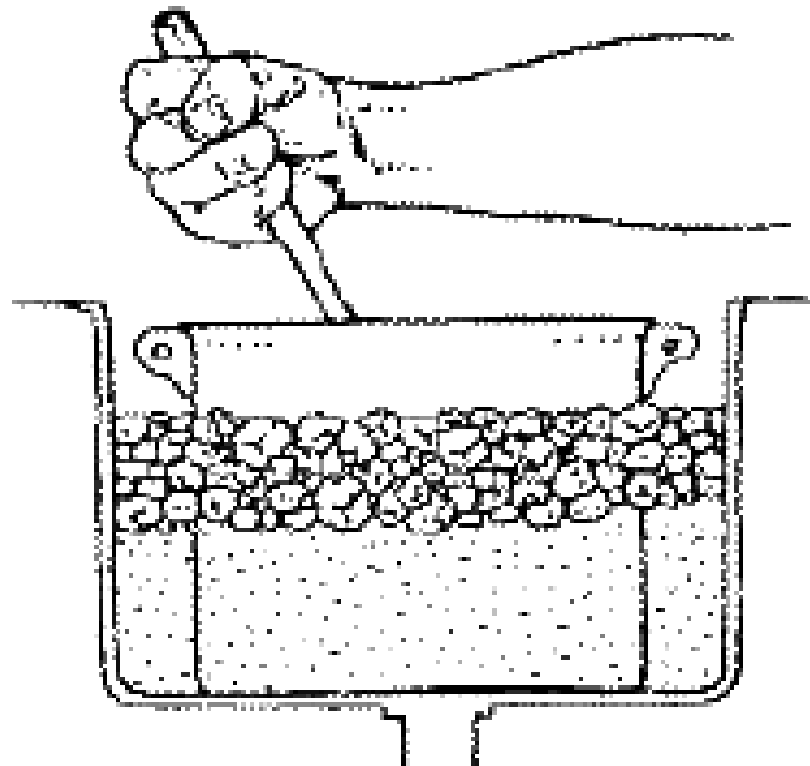
Corrective Action:

- 1= Product did not cool from 135 °F to 70 °F within 2 hours; product was discarded.
- 2= Product did not cool directly from 135 °F to 41 °F within a total of 4 hours; product was discarded.

Cooling – Smaller Portions



Cooling – Ice Water Bath



Cooling – Ice as an Ingredient



Use this method only when recipe gives specific instructions to do so.

Cooling – Ice Paddles



Cooling Don'ts

NEVER cool food at room temperature

NEVER cool large amounts of hot food in a cooler

Reheating TCS Foods

- Reheat it to an internal temperature of 165°F for 15 seconds.
- The total time to reheat a food must not be more than two hours.
- Never use hot holding equipment to reheat food.
- Follow Manager's guidance



Integrated Pest Management



Sanitation



- Keep areas clean and dry
- Look for signs of rodents and cockroaches



Spot Signs of Pests



- Rodents (Rats and Mice)
 - Gnaw marks
 - Dirt tracks along walls.
 - Droppings
 - Nests

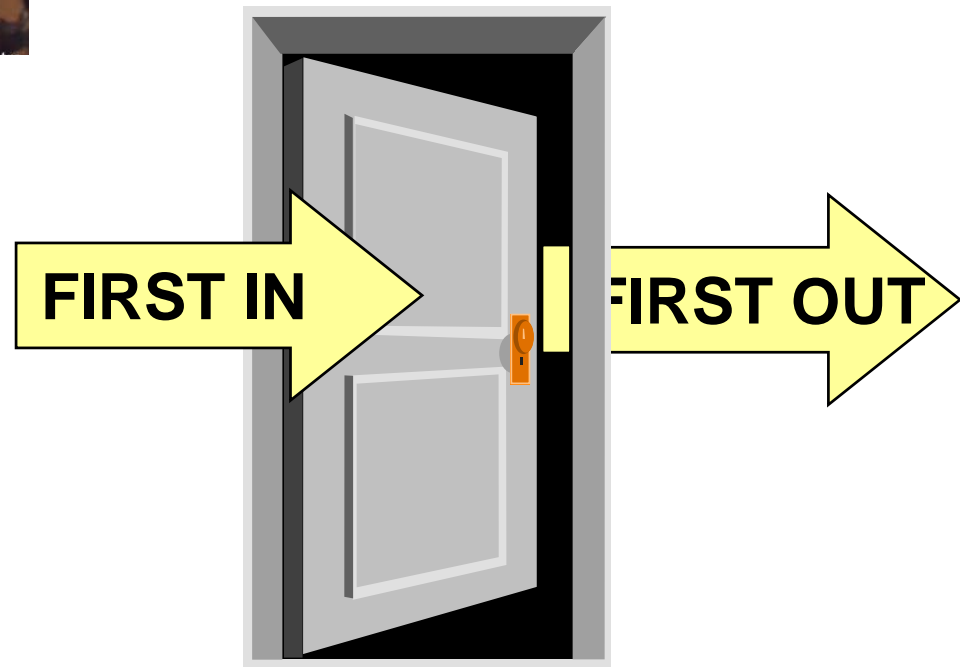
- Cockroaches
 - Capsule-shaped egg cases.
 - Strong oily odor
 - Droppings that look like grains of black pepper



Pest Management

FIFO

- Inspect and date all deliveries
- Discard or return infested or expired products
- Clean up spills as soon as possible.



Storage Areas



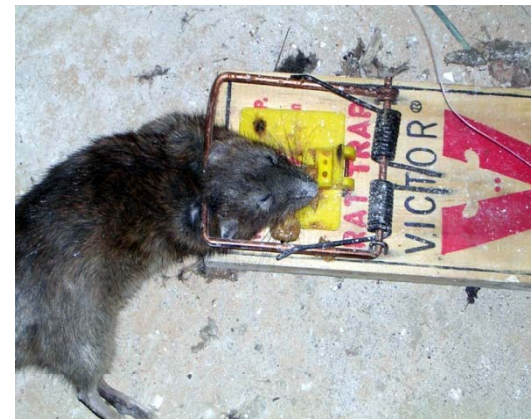
- Keep storage areas well organized, accessible
- Store flour and similar products in sealable food-grade containers

Dumpsters, Trash, and Recycle Cans



- Keep pads/area clean.
- Keep lids closed.
- Use trashcan liners
- Empty and clean trash frequently

Traps and Baits



- Use for insects and rodents
- Check rodent traps daily
- Leave rodent baiting to the professionals.

CONGRATULATIONS!