



VIRGINIA DEPARTMENT OF EDUCATION
OFFICE OF SCHOOL NUTRITION PROGRAMS

Food Safety Toolkit



Food Safety Toolkit

Director

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Acknowledgments

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Toolkit Introduction

Objective

The purpose of this toolkit is to provide information and resources to encourage the safe production and serving of food during the Summer Food Service Program (SFSP) and the At-Risk portion of the Child and Adult Care Food Program (CACFP). Topics include temperature control, protecting food from contamination, identifying Time and Temperature Control for Safety Foods, Employee Hygiene, and maintaining an SFSP site.

Background

Food safety addresses a variety of issues including the avoidance of foodborne pathogens, chemical toxicants, and physical hazards as well as nutrition, food quality, labeling, education, and training. The system for regulating the food supply in the U.S. involves all levels of government. The Virginia Department of Education, Office of School Nutrition Programs (VDOE-SNP) requires schools and community sponsors to establish and maintain a Food Safety Plan to maintain a safe feeding environment for children.

Target Audience

Nutrition directors, staff, and administrators of schools and community sponsors.

Equipment List

Preparation is key to the success and safety of your food preparation site! It is recommended that the following materials are available and accessible for use.

Material	Description
Food Thermometer	A pronged food thermometer is important to testing the internal temperature of foods. This will be most important when taking the temperatures of incoming and/or outgoing deliveries. Instant read thermometers are recommended.
Equipment Thermometer	<p>Equipment thermometers act as a fail-safe for the digital thermometers often integrated into equipment. These thermometers can be purchased from restaurant retailers. They should be placed in the warmest area of a refrigeration unit to provide quick reference that the unit is at the appropriate temperature.</p> <p>Want to learn more about thermometers? Visit the United States Department of Agriculture (USDA) Kitchen Thermometers reference webpage.</p>
Coolers	Coolers may be used for transporting or holding foods. Coolers should be clean, in good repair, and closeable.
Disposable Gloves	Ready-to-eat foods should never be touched with bare hands, so the use of disposable gloves is an essential food safety measure.
Bucket with Sanitizer Solution and Wiping Cloths	A sanitizer solution is important for wiping down highly touched surfaces and cleaning food preparation surfaces. Typical food-grade sanitizers are composed of either a chlorine bleach or quaternary ammonium solution. Wiping cloths should be stored in the sanitizer solution when not in active use.
Sanitizer Test Kit	It is important to ensure the sanitizing chemicals are at the proper concentration. If the solution concentration is too high, it may become toxic. If the solution concentration is too low, it will not properly sanitize. A chlorine solution should have a concentration between 50-150 ppm while that of a quaternary ammonium solution should be between 150 and 400 ppm. Test kits may come with your sanitizer, or they can be purchased separately from restaurant retail outlets.
Hand Sanitizer Towelettes	While hand sanitizer does not substitute for handwashing, it is helpful when conducting activities that have minimal risk of contact.
Ice	Ice is useful to keep on hand in case of equipment failure, to assist in cooling processes, and to keep foods in coolers at 41°F or below.

Creating a Food Defense Plan

All food service operations must have measures in place to reduce the risk of someone intentionally contaminating food. These incidents can harm consumers and cause panic, alarm, and distrust in the food supply. ***A food defense plan helps you identify steps you can take to minimize the risk of intentional contamination or food tampering.*** A plan increases preparedness and will be particularly helpful during emergencies when stress is high and quick responses are essential.

Although food defense is different from food safety, the purpose of both is to prevent food contamination. Food safety focuses on preventing the unintentional contamination of food products that can be reasonably anticipated based on the type of food product and preparation required. This knowledge is used to construct the Hazard Analysis Critical Control Point (HACCP) Plan. Creating a food defense plan, however, does not require development of another HACCP plan. Some of the information you may use to create the food defense plan may already exist in your School Food Safety Plan, Sanitation Standard Operating Procedures, and other emergency response procedures.

According to the USDA, the steps to creating a Food Defense Plan include:

1. assess your current food defense measures,
2. assemble the pieces,
3. complete your plan, and
4. use and maintain your plan.

The [Creating Your Own Food Defense Plan](#) toolkit by the USDA provides an in-depth look into these four steps and guidance to create, implement, and maintain your food defense plan.

Time and Temperature Control for Safety (TCS) Foods

TCS foods are perishable foods that can be hazardous when not cooked or handled properly. These foods must be maintained at certain minimum temperatures or monitored through time control.

Why TCS Foods Can Be Dangerous

Bacteria need just three things to grow: food, moisture, and warmth. Small amounts of bacteria growth in TCS food are not a problem, but too much growth can cause foodborne illness. TCS foods have the nutrients and moisture bacteria need to grow. With time and warmth, these foods can become bacteria breeding grounds.

Time is an important part of bacteria growth. When bacteria have food, warmth, and moisture, their numbers can double every twenty minutes. After four hours, most TCS foods will have a high enough bacteria count that they become dangerous to eat.

Temperature Danger Zone

One of the most important ways we keep food safe is by controlling time and temperature. The temperature danger zone is 41°F to 135 °F. This is the temperature range where bacteria grow rapidly. TCS foods in the temperature danger zone will grow bacteria quickly and can easily become hazardous. It is important to keep hot food above 135°F, cold food at 41°F or below, and all perishable food out of the danger zone. Use a thermometer to ensure that food stays out of the temperature danger zone.

Identifying TCS foods

TCS foods can be raw plant or animal food (e.g., romaine lettuce or chicken breasts) or prepared foods (e.g., macaroni and cheese or a burrito bowl). In general, TCS foods have high protein levels, are less acidic, and contain moisture. The most common TCS foods include but are not limited to:

- milk and other dairy products,
- meat and poultry,
- fish and shellfish,
- eggs,
- plant-based foods that have been heat-treated (e.g., cooked rice, beans, or vegetables),
- soy foods (e.g., tofu, textured soy protein),
- sliced or cut fruits and vegetables (e.g., melons, leafy greens, tomatoes),
- bean sprouts and sprout seeds, and
- untreated garlic and oil mixtures.

Want to hang a poster at your feeding sites to remind your staff about the importance of TCS food safety? Check out this [TCS Foods poster](#) created by StateFoodSafety.

Staff Training

All kitchen staff must be trained on key kitchen procedures including receiving, storing, and preparing foods. A workforce that is knowledgeable in this area will allow managers to maximize the productivity of the kitchen team, prevent waste, and reduce the possibility of cross contamination.

It is recommended that anyone managing a feeding site take an American National Standards Institute approved course to become a [Certified Food Protection Manager](#). Food safety courses for non-managerial roles (e.g., ServSafe Food

Handler course) are important to provide to site personnel. While these certifications are only required for facilities that maintain a health permit, site personnel still need a well-rounded knowledge of food safety.

Site personnel should understand:

- the most common foodborne illnesses and what to do if they are feeling sick,
- the nine most common allergens and how their site handles allergen procedures,
- the temperature danger zone,
- minimum cooking temperatures for different food types, and
- what foods are considered TCS foods.

Additionally, site personnel should be able to demonstrate:

- how to test chemical ware-washing concentrations,
- proper glove usage,
- proper handwashing techniques,
- how to store foods to prevent contamination, and
- proper thermometer calibration, use, and storage.

If you forego food safety certification for your employees and site personnel, conduct your own training and knowledge checks to ensure that all personnel are aware of the basics of food safety and the expectations in upholding public health standards.



Taking Temperatures

Calibrate the Thermometer

You should calibrate a thermometer at least every week, if not daily, and when a thermometer is dropped. Follow your local policy if it includes stricter guidelines regarding thermometer calibration.

Ice Water Method

1. Fill a large container with ice.
2. Add water to within one inch of the top of the container.
3. Stir mixture well.
4. Let it sit for one minute.
5. Place the thermometer in the container so the sensing area of the stem or probe, usually indicated by a dimple, is completely submerged in the water.

6. Keep the thermometer from touching the sides or bottom of the container.
7. Let the thermometer stay in the ice water for 30 seconds or until the dial stops moving.
8. While still submerged, place the calibration tool on the hex adjusting nut and rotate until the dial reads 32°F.
9. Repeat the process with each thermometer and record on the log.

As a best practice, record when you calibrate thermometers on sheets such as logs. This provides evidence that proper food safety practices were followed in the event of a foodborne outbreak.

Watch Chef Cyndie's video on [Calibrating a Thermometer](#) for more.

How to Use the Probe Thermometer

Before each use, wash the stem of the thermometer with soap and water, and sanitize it by dipping the stem into a sanitizing solution or wiping with a sanitizing wipe. Allow it to air dry.

There are many different types of foods, so use the most appropriate method detailed in **Table 1**. Make sure the sensing area of the food thermometer is submerged in the food when taking a temperature. Wait for the temperature display to stay at the same temperature for about 15 seconds.

Looking for a resource to train your staff? Use Chef Cyndie's video on [Using the Probe Thermometer](#).

Table 1. How to Take Temperatures Based on Food Type

Food Type	Instructions
Roasts	Insert thermometer in the middle of the roast, avoiding any bones.
Poultry	Insert thermometer at the thickest part, avoiding any bones.
Casseroles	Check temperature in the center and at several other points.
Thin Meats (e.g., hamburger patties)	Insert thermometer into the side of the food until two to three inches deep.
Milk	Open a carton and insert the thermometer at least two inches into the milk.
Packaged Foods	Place the thermometer between two packages without puncturing the packages.

Proper Cooking Temperatures

Certain cooking temperatures need to be reached for different types of raw food to ensure that microorganisms responsible for causing foodborne illness are killed. **Table 2** details a list of those minimum temperatures.

Table 2. Minimum Cooking Temperatures

Temperature	Food Items
165°F for 1 second	<ul style="list-style-type: none">• Poultry• Stuffing made with fish, meat, or poultry• Stuffed meat, seafood, poultry, or pasta• Dishes made with previously cooked TCS foods
155°F for 17 seconds	<ul style="list-style-type: none">• Ground meat and seafood• Fish nuggets or sticks• Cubed or Salisbury steaks• Eggs cooked for hot holding
145°F for 15 seconds	<ul style="list-style-type: none">• Seafood• Whole cuts of beef and pork
135°F no minimum time	<ul style="list-style-type: none">• Fresh, frozen, or canned fruits and vegetables held hot prior to service• Ready-to-eat food that has been commercially prepared and reheated for hot holding

Hanging the [ServSafe Time and Temperature Control](#) poster at your feeding sites is a great way to remind staff about these cooking temperatures.

Receiving Food

Receiving food is the food service authority's first contact with food. To make sure food is safe while receiving, train staff to inspect products immediately upon arrival.

Inspect Packaging

Reject products if:

- frozen items have ice crystals,
- cans are dented, rusty, or bulging,
- packaging has tears, holes, punctures, leaks, or water stains,
- items show evidence of pest damage, or
- items are expired.

Always check the temperature of frozen or refrigerated foods immediately upon receipt. Check frozen foods to make sure they are frozen solid and show no signs of thawing and refreezing such as wet boxes or large ice crystals. Move foods to storage quickly beginning with refrigerated foods, then frozen foods, then foods for dry storage. Contact the site manager if food is not delivered at the proper temperature.

Receiving Temperatures

See **Table 3** below for appropriate receiving temperatures provided by the National Restaurant Association.

Table 3. Appropriate Receiving Temperatures

Food Type	Appropriate Temperature
Cold Food	Receive at 41°F or below.
Hot Food	Receive at 135°F or above.
Frozen Foods	Receive frozen solid with no signs of thawing.
Eggs	Receive at 45°F or below.

Storing Food

Once food is purchased and received, it must be stored correctly to ensure safety. Accurate storage protocol will reduce wasted time searching for goods and safeguard against food waste. Well managed storage will also increase operational efficiency.

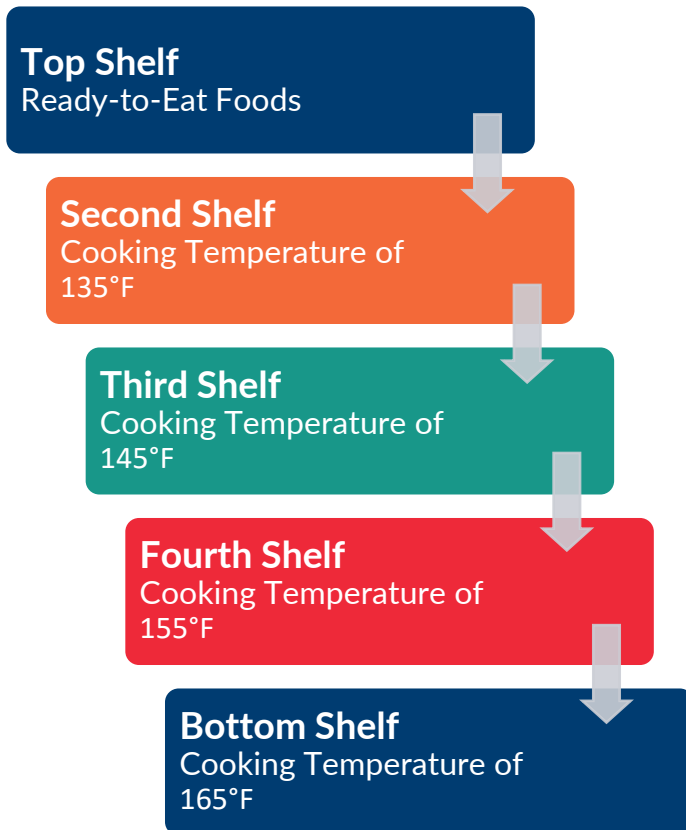
The National Restaurant Association provides the following tips on product storage:

- store all TCS foods at 41° or below,
- alphabetize spices to decrease time spent looking for ingredients,
- label all stored food with the name of the food and the date by which it should be sold, eaten, or discarded,
- incorporate the first-in, first-out (FIFO) method, and
- organize refrigerated food to prevent cross-contamination.

Refrigerated Food Storage

Measure the temperature of your refrigerator often to ensure foods stay out of the temperature danger zone. Keeping your refrigerator at 41°F or below ensures an environment that will minimize the growth of pathogens. Shelves should be organized with foods requiring the lowest cooking temperature at the top and foods requiring the highest cooking temperature at the bottom. This organization method prevents juices or other liquids from higher temperature cooking foods from contaminating foods that will not be cooked to that temperature.

Figure 1. Refrigerator Storage Diagram



Download, print, and display this [Refrigerator Storage Chart](#) by StateFoodSafety and the [Refrigerator Storage Best Practices](#) poster by ServSafe for your site staff.

Dry Food Storage

To maintain food quality for as long as possible, the humidity in your dry storage room should be no higher than 55%. The ideal temperature for dry storage areas is between 50°F and 70°F. Remember these other rules to help maintain food freshness and quality:

- keep food items at least 6 inches off the floor,
- keep shelves away from the walls to allow for ventilation,
- clean regularly to avoid attracting pests,
- store food in its original packaging as much as possible,
- store food from open packages in airtight containers with clear labels, and
- make storage and organization as easy as possible for employees.

Freezer Food Storage

Freezing food is a useful storage method as it stops the growth of bacteria. Though food will be safe indefinitely at 0°F, the quality will decrease the longer the food is in the freezer. You should monitor your freezer's temperature often to ensure that food safety has not been compromised.



Prepping Working Stations

A clean workspace is essential. Prepare, clean, and sanitize tables and in-place equipment (e.g., deli slicers and standing mixers) before use. Wiping cloths should be stored in sanitizer solution between uses, and the solution should be tested before use (see **Equipment List** on page 2 for solution concentrations). A sanitizer spray and dry cloth may also be used. Remove any nonessential items from the workstation

before beginning a task. Ensure that any potential contaminants are properly controlled and removed from the area. See **Preventing Cross Contamination** on page 12 for more tips.

Equipment in continuous use throughout the day should be cleaned at least every four hours or when changing tasks. Always sanitize equipment and surfaces between working with raw meats and other food items. Cutting boards and smaller equipment should be washed, rinsed, and sanitized whenever possible.



Preparing Food

Cooling Foods

Hot food passes through the temperature danger zone as it cools. It is important to get it through the temperature danger zone as quickly as possible to prevent bacteria from growing in the food. Safely cool hot cooked foods within the recommended time frames.

Methods for Cooling Foods

1. Stir soups, sauces, gravies, and chilis while the container is in an ice water bath. The ice water depth should be equal to or greater than the food depth.
2. Transfer hot foods to shallow pans with a product depth of four inches or less and refrigerate. Pans may be uncovered until the food temperature reaches 45°F.
3. Cut solid foods, such as roasts of meat, into portions of six pounds or less after cooking and prior to cooling.
4. Use special refrigerators, known as "rapid chill units," specifically designed to cool foods much faster than standard refrigerators. These units are especially useful when large quantities of foods are prepared in advance.
5. Cool food loosely covered on the top shelf of the freezer. Heat must be allowed to escape.
6. Use chill sticks or ice paddles and ice water baths. Ensure cooling food is stirred frequently to allow heat to escape.

Time and Temperature Control

Hot food must be cooled from 135°F to 41°F within a total of 6 hours. It must be cooled from 135°F to 70°F within the first 2 hours and then cooled from 70°F to 41°F in the next 4 hours.

Room temperature food must be cooled to 41°F within 4 hours.

If cooling times and temperatures are not met in the first 2-hour parameter, the food may be reheated to 165 °F for 15 seconds and then cooled again, or it must be discarded.



Reheating Foods

Reheating food requires food to pass through the temperature danger zone. Reheat foods to 165°F for 15 seconds within 2 hours to destroy microorganisms in the food. Hot service food items must then be held at 135°F or above. Foods can be reheated in the microwave if foods are periodically stirred or turned to ensure internal temperature reaches the minimum of 165°F. Foods can also be reheated on stovetops or ovens.

Need a poster? Download and display the [State Food Safety Reheating Food Poster](#).

Thawing Foods

While freezing food stops the growth of bacteria, it does not kill the bacteria. Bacteria can reawaken and start to reproduce as food thaws.

Thus, it is crucial to defrost food properly to ensure bacteria does not continue to grow.

Never defrost food at room temperature. Properly defrosting food is an important step in food safety. Ensure that food is fully defrosted before cooking unless otherwise instructed by the product manufacturer. There are four ways in which to defrost food safely: in the refrigerator, under cold running water, in the microwave, or as part of the cooking process.

Refrigerator Thawing

The refrigerator thawing method takes time and, thus, planning is key. For example, a large frozen item (e.g., a turkey) requires at least 24 hours for every 5 pounds of weight to thaw. Even small amounts of frozen food (e.g., a pound of ground meat or boneless chicken breasts) require a full day to thaw.

After thawing in the refrigerator, items such as ground meat, stewed meat, poultry, and seafood should remain safe for an additional day or two before cooking. Red meat cuts are safe for 3 to 5 days after thawing. Food thawed in the refrigerator can be refrozen without cooking although there may be some loss of quality.

Cold Running Water Thawing

To use this method, use a clean and sanitized sink large enough to allow the food item to be completely covered by water. Completely submerge the food item under running cold potable water. The food should be held in leak-proof, waterproof packaging to prevent cross-contamination. Defrosting must be completed within two hours. If thawed completely, the food must be cooked immediately. Foods thawed by the cold water method should be cooked before refreezing.

Microwave Thawing

When thawing food in a microwave, plan to cook it immediately. Foods thawed in the microwave should be cooked before refreezing.

Cooking Without Thawing

It is safe to cook foods from the frozen state, but the cooking will take approximately 50% longer than the recommended time for fully thawed or fresh meat and poultry.

Time Control Plans

There are circumstances where it may be more reasonable to use time control instead of temperature control. Time control is a method of ensuring that TCS foods do not sit in the temperature danger zone longer than four hours. If an item sits outside of temperature control for longer than four hours, it must be discarded. The foods kept on time control must have a label or other indicator to track when four hours have passed. A timer that alarms when the food must be discarded is also sufficient.

When ambient temperatures reach 90°F and above in the summer months, food spoilage may be accelerated; practice your best judgment when using a time control plan.

It is best practice that the person in charge of operation maintain records to ensure the time control plan is being followed effectively. This record should include the:

- monitoring employee's name,
- food name/type,
- time food is prepared and/or brought out of cold holding, and
- time food was discarded.

According to [Virginia code](#), facilities that use time control must maintain a written plan on file.

Examples and sample templates can be found below.

- [Sample: Time Control Plan Template](#)
- [Example: Texas DSHS Time control procedure and log](#)

Holding and Transporting Food

Once a food is prepared, it should be held hot at 135°F or above or cold at 41°F or below until served. Maintain these temperatures when transporting food to another site. Use an appliance thermometer to ensure refrigerators and/or portable coolers are at the correct temperatures. Use a food thermometer to check the temperature of perishable foods.

Milk and items like sandwiches containing deli meat should arrive cold to the feeding site.
Contact the site manager if the food is not delivered at the proper temperature.

Lastly, transportation vehicles should always be clean and free of debris.



Hand Washing



Figure 2. Temporary Hand Wash Set Up

Hand washing is one of the most important tools to prevent foodborne illness and transfer of viruses. If a plumbed hand sink is not available, sites should explore other options to facilitate proper hand washing.

Set up a temporary hand washing station if your site lacks a permanent hand washing sink, the sink is not easily accessible, or you are conducting operations out of a vehicle. A temporary hand washing set up should include the following:

- warm flowing water (a coffee urn set in the sun may suffice),
- hand soap,
- disposable paper towels, and
- a catch bucket for wastewater.

Hand sanitizer, while helpful and recommended, does not substitute for handwashing.

Proper Hand Washing Technique

Scrub hands with soap under running water with sufficient flow to remove debris for at least 20 seconds. The water temperature should be at

least 100°F. Use disposable or a single use cloth to dry hands. Handwashing should occur only at a designated hand sink, not in a utility or ware washing sink.

At a permanent hand sink, hand washing signage should be present and clearly visible.

When to Wash Hands

You should always wash your hands:

- after touching an unsanitary surface,
- after touching your face, clothes, or hair,
- before putting on a new pair of gloves,
- after touching dirty utensils,
- before touching clean utensils and single-service items,
- after using the restroom,
- after handling chemicals,
- anytime hands are soiled or contaminated,
- between working with different foods,
- between switching tasks,
- after using tobacco products,
- after eating, and
- after coughing or sneezing.

Hand Washing Resources

- [Virginia Department of Health \(VDH\) Hand Washing Sign](#)
- [State Food Safety Hand Washing Procedure Poster](#)
- [City of Philadelphia Temporary Hand Washing Station Tips](#)
- [VDH Food Safety at Temporary Events](#)

Ready-to-Eat Foods

Ready-to-eat (RTE) foods are prepared to be immediately consumed. These foods have either already been cooked and assembled or did not require any cooking. Examples of RTE foods include:

- salads,
- deli meats,
- smoked fish,
- desserts,
- sandwiches,
- cheese,
- fresh fruits and vegetables, and
- breads/rolls.

Because these foods will not undergo another stage of heat treatment to kill bacteria, it is important they are handled with extreme care prior to service.

RTE foods should always be covered while stored. If they are a TCS food, RTE foods should also be stored at the proper temperature. Additionally, RTE foods should never be touched with bare hands. Instead, use barrier (e.g., gloves, deli paper, or tongs) when handling these foods. RTE foods available for self-service, such as a fruit bowl or salad bar, should also have a barrier available for customers to use.

Examples of improper handling of RTE foods include:

- using bare hands to touch bread for a sandwich,
- using bare hands while cutting tomatoes for a salad, or
- allowing yogurt to sit at room temperature longer than four hours before meal service.



Proper Glove Use

Gloves must be used as a barrier whenever handling RTE foods. Before donning gloves, ensure they are impermeable, made of a smooth, non-fibrous material, and are not torn or damaged. Additionally, employees should always wash hands before donning and changing gloves. Gloves should be changed at least every four hours or whenever changing tasks. Gloves should also be changed in the following scenarios:

- after coughing or sneezing,
- after touching an unsanitary surface,
- after touching one's face, clothes, or hair,
- after touching dirty utensils,
- anytime gloves become soiled or contaminated,
- between working with different foods, and
- after eating.

Remember that contaminated gloves can carry as many germs as bare hands, so proper glove use is essential! Hang this [proper gloves use poster](#) by StateFoodSafety at your sites as a reminder to your staff and volunteers.

Preventing Cross Contamination

Cross-contamination is the physical movement or transfer of harmful bacteria from one person, object, or place to another. Preventing cross-contamination is a key factor in preventing foodborne illness.

Receiving

The first way to prevent contamination is to keep contaminated food and nonfood items out of the operation. During receiving, ensure that all

packaging is intact and clean. Reject items if the packaging is dirty, water stained, leaking, or discolored. Packaging should not have holes, tears, punctures, or other types of damage. Make sure cans are not dented or rusty or have swollen ends. Lastly, always reject items if you see signs of pests.

Storage

Food Storage

Place raw meat, poultry, and seafood in containers or sealed plastic bags to prevent their juices from dripping onto other foods. Raw drippings often contain harmful bacteria. Store raw, unpasteurized eggs in their original carton and refrigerate as soon as possible. All raw products should be stored below RTE foods.

Tips for preventing cross-contamination in food storage include:

- wrap or cover food before storing it.
- never use old chemical containers to store food,
- only store food in containers intended for food, and
- store raw and ready-to-eat food separately, if possible.

See **Storing Food** on page 6 for additional storage tips.

Utensils and Equipment

Utensils and equipment with food-contact surfaces (e.g., cutting boards) must be stored in ways that prevent contamination. The same is true for nonfood items such as napkins and plastic forks and knives. When storing these nonfood items:

- ensure that all storage areas are clean and sanitized,
- store utensils with handles up to prevent touching of the food-contact surface, and
- store pans, bowls, and other equipment upside down to prevent debris from falling into them.

See **Storing Food** on page 6 for additional storage tips.



Preparation

When you prepare food, you may handle both raw and RTE food items. Pathogens can easily transfer from one food to another if you are not careful. Harmful bacteria can spread throughout the kitchen and onto cutting boards, utensils, and countertops. To stay safe, follow these guidelines:

- wash hands according **Hand Washing** protocol (see page 10),
- follow **Proper Glove Usage** (see page 11),
- use hot soapy water and paper towels or cloths to clean all surfaces and spills,
- wash clothes often in the hot cycle of your washing machine, and
- clean and sanitize workstations, cutting boards, dishes, countertops, equipment, and utensils before and after each use.

The sections below outline instructions for specific foods, utensils, and food preparation methods.

Cutting Boards

- Always use a clean cutting board.
- Use one cutting board for fresh produce and a separate one for raw meat, poultry, and seafood.
- Replace cutting boards once they become excessively worn or develop hard-to-clean grooves.

Marinating Food

- Always marinate food in the refrigerator, not on the counter.
- Do not re-use marinade for raw meat, poultry, or seafood as a sauce on cooked foods unless it is boiled just before using.

Raw Meats

- Prepare raw meat, seafood, and poultry at a different time than RTE foods when using the same table.
- Do not allow RTE foods to touch surfaces that have come in contact with raw meat, seafood, or poultry.
- Keep raw meat, seafood, and eggs away from other foods while transporting them and when storing them in the refrigerator.
- Pack your raw meat and poultry separately from your RTE foods when shopping. If using reusable bags, designate one bag for raw meats only.
- Wash down all surfaces with hot soapy water after you have finished preparing your raw meat or poultry.

Fruits and Vegetables

- Rinse fresh fruits and vegetables in running tap water slightly warmer than the temperature of the product to remove visible dirt and grime.
- Remove and discard the outermost leaves of a head of lettuce or cabbage.
- Avoid leaving cut produce at room temperature for many hours.
- Do not mix different produce items or batches of the same produce item when soaking or storing in standing or ice water.
- Refrigerate and hold sliced melons, cut tomatoes, and cut leafy greens at 41°F or below.
- Keep test strips from your chemical supply company on hand if using produce wash.



Preventing Cross Contact

Cross contact is like cross-contamination but in relation to allergens. Allergic reactions can often be deadly, and depending on the severity of the allergy, the smallest amount of an allergen can trigger a reaction. A plan must be in place to prevent such an occurrence. Precautions to prevent cross contact are like those to prevent cross-contamination.

The nine common food allergens include:

- eggs,
- milk,
- wheat,
- fish,
- shellfish,
- tree nuts,
- peanuts,
- soy, and
- sesame.

Have a written allergy procedure prepared for your site. Request allergy information and any other dietary restrictions ahead of time from participants whenever possible. If an allergy is reported to your kitchen staff, be sure that all cooking equipment, surfaces, and utensils are free from possible cross contact with the allergen. Properly clean and sanitize all pots, pans, serving utensils, plates, bowls, etc. If deep frying, you must have a designated allergen-free fryer or change the fry oil and clean thoroughly. If possible, it is highly recommended to have separate equipment reserved for allergy dishes. Often this equipment may be color coded to indicate that it is only to be used in the case of an allergy. Lastly, staff preparing the dish should wash hands and change gloves.

Want to learn more about what you can do to accommodate your students with allergies? Read [VDH article on Food Allergen Awareness](#) for more.

Service

To prevent cross contamination at food service:

- always use a clean plate,
- never place cooked food back on the same plate or cutting board that previously held raw food,
- wear clean gloves when handling RTE foods, and
- use separate utensils for separate products.

Resources to Prevent Cross Contamination

- [Chef Cyndie Cleaning and Sanitizing Video](#)
- [Chef Cyndie Preparing Food the Right Way Video \(part 1\)](#)
- [Chef Cyndie Preparing Food the Right Way Video \(part 2\)](#)
- [Chef Cyndie Preparing Food the Right Way Video \(part 3\)](#)

Ware-Washing and Chemical Handling

When cleaning food contact equipment, you must follow the proper washing, rinsing, and sanitizing procedures to effectively kill pathogens. These procedures apply to items used in cooking, preparing, and serving foods. Many food operations have a ware-washing contract with a licensed chemical vendor or dish machine maintenance company. These contracts are highly recommended. Not only will a vendor contract ensure that a site never runs out of supplies, but it can also serve as a resource and on-call service should issues arise.

Manual Ware-Washing: Three-Compartment Sink

1. Wash.
 - Combine dish soap with warm water in the first compartment of your three-compartment sink.
 - Scrub any debris or food particles from surfaces.
2. Rinse.
 - Rinse soap and debris from surfaces in plain warm water in the second compartment of your sink.
3. Sanitize.
 - Combine chosen chemical sanitizer (e.g., chlorine bleach or quaternary ammonium) with warm water in the third compartment of your sink.
 - Test the sanitizer solution concentration before use (see **Equipment List** on page 2 for more on solution concentrations).
 - Do not attempt to combine this step with the previous two by adding sanitizer to another solution.
 - Do not rinse after sanitizing.

4. Dry.
 - Allow items to air dry.
 - Do not towel dry.
 - Do not return items to clean storage area until completely dry.

Resources

- [*FDA Wash, Rinse, Sanitize Poster*](#)
- [*How to Use Sanitizer Test Strips video*](#)

Mechanical Ware-Washing

In mechanical ware-washing, a dish machine carries out the wash, rinse, and sanitize during a dish cycle. Some dish machines will use heat instead of chemicals to sanitize. A heat sanitizing dish machine should reach a minimum temperature of 160°F. The operator must test the internal temperature of the machine during the heat cycle. This should be conducted through an irreversible temperature reading device operated in the dish machine (e.g., a temperature heat plate or heat test strips).

Resources

- [*Ware-Washing Machines Impact on Food Safety*](#)
- [*Thermoworks: Mechanical Dishwasher Testing*](#)

Clean in Place

Some food equipment cannot go through a dish machine or be immersed in a three-compartment sink. Equipment such as deli slicers, food processors, commercial blenders, ovens, and standing mixers may require a clean in place technique.

To clean an item as it stands:

1. disconnect it from electricity,
2. detach, wash, and sanitize any removeable parts,

3. wash and rinse the interior and any hard-to-reach places with a cloth,
4. spray or wipe surfaces with a sanitizer solution,
5. allow all parts to air dry before reassembly.

See this [Clean in Place Procedure poster](#) for more information.

Proper Chemical Handling

Chemicals used in ware-washing, sanitizing, and general cleaning should be stored safely away from food and single use items. Chemicals should never be stored directly next to or above food and single use items. Chemicals should be stored out of reach of children. Only chemicals related to food service and cleaning activities should be kept on the premises. Pest control chemicals should only be used by licensed pest control operators, and therefore, these types of chemicals should not be kept on the premises. Aerosol pesticides (e.g., RAID and HotShot) may not be present in food establishments. Employees should always wash their hands after handling any types of chemicals. When in active use, carefully control the chemical application so that no residual spray or drippage can contaminate any food items.

Medicines should be stored in an area where no contamination of food and single use items can occur.

Regularly remind your staff to [Use Chemicals Safely](#).

Student and Employee Health

Written Procedures

A feeding site should prepare a written procedure in the event of illnesses that result in vomiting or diarrhea. If these symptoms are the results of foodborne illness, the physical excretions may be highly contagious and must be cleaned correctly to kill pathogens. Use a chlorine bleach solution with a concentration of 1,000 to 5,000 ppm (between 5 to 25 tablespoons of household bleach [5% to 8%] per gallon of water) or other disinfectant registered as effective against norovirus by the Environmental Protection Agency.

Follow the written procedures for cleaning. Use the following examples to draft a procedure for your sites:

- [ServSafe written procedure](#) example and
- [written procedure poster](#) by the Water Quality and Health Council.





Employee Health

All employees working with food should be aware of the most common foodborne illnesses, also known as the “Big 6”, including *E. Coli*, *Salmonella*, *Salmonella Typhi*, *Shigella*, *Norovirus*, and *Hepatitis A*. The symptoms of foodborne illnesses include nausea and vomiting, diarrhea, jaundice, sore throat with fever, and infected cuts or wounds. Any employee actively experiencing symptoms of foodborne illness should not come into work, and a standard procedure should be in place for these occasions.

If diagnosed with any of the above illnesses, the employee should not return to work until symptoms have resolved and a doctor provides written clearance for the employee to return. Managers should reference the [Virginia Guide to Employee Health](#) for specifics about excluding sick employees.

Employee Training

All employees who work with food should receive adequate training about the common foodborne illnesses and their symptoms. Managers should maintain a signed record that each employee receives this training. Managers can either create their own document to record this training or use [Form 1-B](#) provided by the VDH. If the records are self-made, they should include the following:

- the “Big 6” common foodborne illnesses,
- the symptoms of foodborne illness,
- a statement of acknowledgement that the employee is aware of their responsibility not to work when sick and report any diagnoses of foodborne illnesses to management, and
- the signature of the employee and a direct supervisor.

Resources

- [*Food Worker Illness Flowchart Poster*](#)
- [*Feeling Sick? Symptoms Poster*](#)
- [*FDA Employee Health Poster*](#)

Pest Control

Pests, such as rodents, cockroaches, and flies, may carry dangerous diseases. Some pests can be vectors for bacteria and diseases, creating unsanitary and unhealthy conditions. Others can cause structural damage to buildings. Infestations can be tricky to identify and may require professional knowledge and experience.

To keep pests from contaminating food supplies and food contact surfaces, a food establishment should implement [an Integrated Pest Management \(IPM\) program](#). An IPM program consists of several precautionary steps established to keep pests out of facilities and eliminate pests that do get in.

Pests can enter any building through doorways, windows, openings, and even the smallest cracks and crevices. While there are some cleaning best practices to help deter them, pests may invade even the cleanest of facilities. School and non-school sponsors can be susceptible to pest infestations because of:

- frequently opened doors,
- frequent deliveries,
- improperly stored food,
- food preparation areas,
- cafeterias,
- improperly sealed doors and windows,
- cracks and gaps in the exterior of the building, and
- number of people passing through.

Ways to Prevent Pest Infestation

- Write a food defense plan.
- Implement an IPM program.

- Use reputable suppliers only.
- Store items in safe enclosed containers and at least six inches off the floor.
- Dispose of garbage regularly with a tightly closed lid.
- Ensure dumpsters are emptied frequently and the area is free of all trash and debris.
- Use air curtains over doors.
- Maintain and follow a cleaning schedule.
- Clean drains frequently.
- Reduce clutter or areas where pests can hide.
- Seal and close off any cracks or holes to eliminate outside entry.
- Perform routine cleaning and surveying from the roof to the floor.

Factors of Consideration During Service

During active meal service, there are several factors to consider while meals are distributed. Personnel should do their best to mitigate risk through proper management of these factors.

Heat

High temperatures present challenges at feeding sites to maintain foods at a safe temperature. If using temperature control, staff should closely monitor the temperature in coolers, fridges, and freezers to ensure that equipment is functioning properly. Cold held TCS foods should not exceed a temperature of 41°F. Cold held TCS foods being kept on time control should still avoid exceeding 70°F. If possible, make sure your site has working air conditioning. This is not only for the comfort of your staff and participants, but also to save on energy costs and malfunctions as cold-holding equipment works harder to maintain a 41°F environment. If there is no air conditioning, use fans for air flow and/or tents for shade. Avoid leaving refrigerator and freezer

doors open and regularly check ambient air thermometers in equipment. Use your food thermometer to check food temperatures during service. Finally, make sure that equipment is up to date on any servicing requirements, internal and external fans/filters are clean, and all gaskets and hinges are in good repair.

Time

In the rush of a service when managers are juggling tasks and high demand, time can be difficult to track; however, tracking time is critical to controlling food safety when using a time control plan. Ensure that the time control plan is properly followed by starting a 4-hour timer as soon as TCS foods are removed from temperature control. Label those foods with the time they should be discarded. These labels can be made ahead of time if meal service is conducted on a routine time frame. Designate one staff member to monitor the time. Try to fill out some aspects of these records beforehand, so there is no scramble to record information when the meal service begins.

Contamination

Prepared foods should be sufficiently covered to prevent physical debris from contaminating the meal. Protect foods by serving in sealed containers and/or storing in secure coolers. When serving food outdoors, overhead protection (e.g., pop-up tent cover) is strongly recommended to provide additional protection. Do not serve from open containers outside since there is sufficient risk for debris and insects to contaminate the food.

Supplies

Have a conveniently located back stock of

supplies when starting service. Items like gloves, hand sanitizer, chemical towelettes, clean utensils, and hand washing supplies should be easily accessible. Running out of stock can cause disruptions in service or lead to improper handling of food.

Shared Tasks

Ensure that staff understand their roles ahead of time, and split tasks among your staff as equally as possible. Properly prepare staff for service, inform them of expectations, and ensure they can communicate needs or questions effectively.

Share Tables

Share tables are a valuable method of preventing food waste and allowing participants extra servings of an item they enjoy. Once a participant takes all the required components, they may decide they are not interested in one of the food items. They can leave that item on a communal Share Table for another participant who may want an additional portion. Share Tables can also involve a communal refrigerator or cooler if there are concerns about maintaining food quality or temperature control.

Some structure around this concept is still necessary to make sure it is operated safely.

Share Table Structure

1. Designate the time to donate to the Share Table as the beginning of the meal only.

Always ensure that participants wash their hands before mealtime. Once a participant begins eating, their hands can contaminate the packaging and transfer pathogens easily to other participants. Avoid this by ensuring participants' hands are still clean when items are donated.

2. Only allow packaged or wrapped items to be donated.

Once an unpackaged RTE food has been touched by an ungloved hand, it is no longer safe for another participant to consume. This includes unwrapped fruits and/or vegetables.

Some examples of safe foods that are generally always safe to donate include:

- ✓ packaged crackers, cookies, chips, or granola bars,
- ✓ bottled juice,
- ✓ fruit cups, most fresh packaged fruits, and most fresh packaged vegetables, and
- ✓ a pre-packaged sandwich not consisting of deli meat or cheese.

A packaged TCS food can also be donated, but it would require some manner of time or temperature control.

3. Maintain time or temperature control for donated TCS items.

If possible, keep TCS items cold in a cooler or cold holding equipment. Otherwise, take measures to ensure that TCS foods are not out of temperature control longer than 4 hours. Hot items should be returned to hot-holding equipment or, if not possible, discarded after 4 hours out of temperature control.

If items can only be held in equipment that is not communally accessible, site personnel should provide extras to interested participants upon request.

4. Do not allow participants who are selecting an extra serving to touch more than one item if their hands are not clean.

Share Table Scenarios

Example 1

Ms. Irene works as an activity coordinator for The Kids Outdoors Club of Richmond. The club offers an SFSP snack with their activities at a local park. Snack time begins at 4:00 PM and ends at 4:30 PM. Snacks are delivered to the site from the club's main location at 4:00 pm. Today, the site is serving a packaged peanut butter and jelly "uncrustable" sandwich and a half pint of milk.

After washing her hands in the park restroom, Lilly takes both food items back to her picnic table. Ms. Irene calls out that anyone who doesn't want their snack can bring it to the table next to her. Lilly decides she does not want her milk and places it on the share table located under a shaded picnic shelter where Ms. Irene is sitting. She notices that another participant has left a sandwich, and Lilly takes that back to her seat with her. No one else wanted the milk, and when the timer goes off after the 30-minute snack period has passed, Ms. Irene disposes of the leftover milk.

Because this snack time is only 30 minutes long, the TCS milk does not need to be placed in temperature control. Site staff should ensure they have a written time plan on file and a timer for the duration of snack time. If the milk is not consumed, it should then be discarded.

Example 2

Mr. Davis volunteers at an SFSP site run by his local church. Their dining hall is open for any child in the community to partake in a meal. They have a lunch available in their church's kitchen from the hours of 2 PM to 7 PM.

Today's meal consists of milk, a packaged ham and cheese sandwich, a whole apple, and a bag of baby carrots.

Carl comes into the dining hall and washes his hands before receiving his meal and selecting his seat. Upon review of the meal, Carl decides he is a vegetarian today and does not want his ham and cheese sandwich. He also suddenly hates apples. He tells this to Mr. Davis who sees the sandwich packaging is unopened and directs Carl to place his sandwich in the share fridge available in the corner of the dining hall. Carl gets up to place his sandwich and apple in the fridge but is stopped by Mr. Davis. Mr. Davis explains that the apple cannot be shared because it is not wrapped, and Carl has already touched the outside skin with his bare hands. Carl throws away the apple, and upon placing the sandwich in the fridge, sees an unwanted milk that had been left and takes it back to his seat with him.

Because the duration of this mealtime exceeds four hours, Mr. Stephens has taken measures to ensure that TCS foods can be kept cold rather than relying on time monitoring. If his church did not have an extra fridge to use as a share fridge, Mr. Stephens could have taken Carl's sandwich to a fridge in the kitchen on his behalf and brought it to someone who wanted an extra later. Because the skin of fresh fruit is directly consumed, it should not be touched with bare hands, and therefore, was not fit to be given to another participant after Carl had touched it.

Definitions

3-Compartment Sink: a type of ware-washing sink with 3 distinct compartments to allow for the separate processes of washing, rinsing, and sanitizing dirty equipment and utensils.

Additive: any substance added to food capable of changing the standard characteristics of said food. All food additives must be GRAS list compliant (e.g., spices, food coloring, certain vitamins).

Air Curtains: a fan-powered device that creates an invisible air barrier over the doorway to efficiently separate two different environments.

Approved Suppliers: suppliers that have been inspected and meet applicable local, state, and federal laws.

Bacteria: living single-celled organisms. Bacteria can be carried by water, wind, insects, plants, animals, and people. They survive well on skin and clothes and in human hair, and they also thrive in scabs, scars, the mouth, nose, throat, intestines, and room-temperature foods.

Bacterial Growth: an increase in the number of bacteria in a population.

Big 6 Foodborne Illnesses: the six most common foodborne illnesses include Salmonella, Salmonella Typhi, Shigella, Norovirus, Hepatitis A, and E. Coli.

Biological Contaminants: the presence of microorganisms, such as viruses, bacteria, parasites, and fungi, that can contaminate the food.

Biological Hazard: the danger of food contamination by disease-causing microorganisms (i.e., bacteria, viruses, parasites, or fungi) and their toxins and by certain plants and fish that carry natural toxins.

Biological Toxins: harmful substances (e.g., poisons) produced by pathogens, plants, or animals.

Calibration: the process of adjusting equipment to ensure measurements are accurate.

Chemical Contaminants: chemical substances, such as cleaners, sanitizers, or polishers, that leak from cookware and equipment and have contaminated food.

Chemical Hazards: chemical substances that can contaminate food (e.g., cleaners, sanitizers, or polishers that leach from cookware and equipment).

Clean: free of visible dirt. This term refers only to the appearance of a surface, not to bacteria that can still contaminate food.

Cleaners: chemicals that remove food, dirt, rust stains, minerals, or other deposits from surfaces.

Cleaning: the process of removing food and other types of dirt from a surface. This term refers only to the appearance of a surface, not to bacteria that can still contaminate food. Cleaning is **not** synonymous with sanitation and disinfection.

Cleaning Checklist: an important part of the Hazard Analysis and Critical Control Points (HACCP) plan. It is a list of all the surfaces and activities that need to be cleaned and is divided by the frequency. The cleaning checklist helps you and your team to stay organized on your cleaning tasks.

Commercially Prepared: food prepared by a food manufacturer; can come in forms such as pre-packaged, pre-portioned, or pre-cooked.

Contamination: the unintended presence of potentially harmful substances, including microorganisms, in food.

Cooking Temperature Chart: reference chart to remember all necessary internal cooking temperatures to prevent foodborne illnesses and protect your organization.

Corrective Action: the process of defining a problem, containing the problem, determining its cause, and taking appropriate action to prevent it from recurring.

Critical Control Points (CCPs): steps in food production to prevent or reduce food safety hazards to an acceptable level. CCPs exist at every stage of the process from ordering ingredients to serving the products.

Cross-Contact: the transfer of an allergen from a food containing an allergen to a food that does not contain the allergen.

Cross-Contamination: the transfer of harmful substances or disease-causing microorganisms to food by hands, food-contact surfaces, sponges, cloth towels, and utensils that touch raw food, are not cleaned, and then touch ready-to-eat foods. Cross-contamination can also occur when raw food touches or drips onto cooked or ready-to-eat foods.

Danger Zone: the range of temperatures between 41°F and 135°F where bacteria grow most rapidly, doubling in number in as little as 20 minutes.

Date Marking: a process assuring the food is discarded before bacteria can cause foodborne illness. Date marking is required for ready-to-eat food.

Degreaser: a cleaner designed to remove grease, oils, cutting fluids, and corrosion inhibitors.

Detergent: a chemical substance, usually in the form of a powder or liquid, used for cleaning kitchen equipment.

Employee Health Policy: a written policy detailing procedures for employee illness.

Expiration Date: the date that the manufacturing company lists on the label for how long a food product will 'stay good' while unopened. This date is not to be confused with the product shelf-life.

Food Allergen: a protein in certain foods that causes a harmful reaction in individuals with food allergies. The nine most common food allergens include milk, eggs, fish, crustacean shellfish, tree nuts, peanuts, wheat, soy, and sesame.

First-In, First-Out (FIFO): a method of stock rotation in which products must be shelved based on their use-by or expiration dates so the oldest products are used first.

Food Contact Surface: any surface that directly touches food, such as a cutting board, knives, and serving utensils.

Food Traceability: form of record-keeping to track all ingredients and food items throughout production supply chain. This enables tracking the movement of food items and provides a tool for food recalls.

Foodborne illness: an illness caused by pathogens, including bacteria, viruses, parasites, and molds, and non-infectious agents (e.g., chemicals, toxins, and metals); also called “food poisoning” and “stomach flu”.

Foodborne Illness Outbreak: when two or more people contract the same illness from consuming contaminated food or liquids with a common source.

Food Contact Surfaces: a surface of equipment or a utensil with which food normally comes into contact (e.g., cutting boards, knives, sponges, countertops, and colanders).

Fungi: a group of microorganisms that includes molds and yeasts.

Generally Recognized as Safe (GRAS) List: a list generated by the Food and Drug Administration (FDA) detailing the only additives acceptable to add to foods.

Hazard Analysis Critical Control Points (HACCP): an internationally recognized method of identifying and managing food safety-related risks. It is controlled by the local governmental authorities.

HACCP Assessment Risk Matrix: a table that helps determine the type of hazard according to the level of likelihood and severity from low to high.

HACCP Plan: a comprehensive document that identifies all the food-related activities, processes, and associated hazards the food business may have and details how to handle them. The HACCP plan is proof that your business complies with the law.

Hair Restraints: usually hats, hair coverings and nets, beard restraints, and clothing that covers body hair.

Handwashing Station: a sink designated for handwashing only. Handwashing stations must be conveniently located in restrooms, food-preparation areas, service areas, and dishwashing areas. These should be properly and visibly labeled.

Hazard Analysis: the process of determining what might be a hazard, and what should be done if someone or something is exposed to this hazard.

Health Inspector: a governmental staff member who conducts food service inspections among food handling companies and helps to ensure food safety.

Heat-Sensitive Tape: tape that adheres to a surface and changes color when a certain temperature has been reached.

Highly Susceptible Population (HSP): a group of persons who are more likely than other populations to experience foodborne disease because they are either immunocompromised, adults over 65 years of age, or children under the age of 5. These groups are often served at hospitals, nursing homes, or daycares.

High Temperature Thermometer: a thermometer designed to reach high temperatures. If using in a dishwasher, the thermometer must have manufacturer approval.

Hot Holding: holding food after it has been cooked to a safe temperature to serve at 135°F or above.

Hot Holding Equipment: equipment designed to hold food at an internal temperature of 135°F (57°C) or higher.

Ice Paddle: a paddle filled with ice to cool hot food quickly.

Ice Water Bath: a method to cool food down quickly. Ice bathing while stirring food with an ice wand provides very effective cooling for soups, sauces, and beans.

Incidence: the number of new cases of foodborne illness in a given population during a specified period (e.g., the number of new cases per 100,000 population per year).

One-Time Temperature Indicator: a type of temperature measurement device only activated if a certain temperature is reached; only able to use it one time.

Material Safety Data Sheets (MSDS): sheets supplied by the chemical supplier that include the names of the supplies, potential physical and health hazards, and information about using and handling them safely. These are an important part of the HACCP plan.

Microorganisms: small living organisms that can only be seen with the aid of a microscope.

Minimum Internal Temperature: a required minimum temperature the food must reach to eliminate harmful microorganisms.

Mold: a type of fungus that breaks down the food and starts to rot.

Monitoring: a periodic check to ensure that food safety hazards are under control. Monitoring is one of the most effective tools to ensure food safety.

Pasteurization: a heat-treatment process that destroys pathogenic microorganisms in certain foods and beverages, extending the shelf life and making food consumable for Highly Susceptible Populations. This term is often in reference to milk, eggs, and juices.

Parasite: a microorganism that needs a host to survive (e.g., cryptosporidium, toxoplasma).

Pathogen: a disease-causing infectious microorganism.

Perishable: a food item with a limited or short shelf life before quality or safety of the food is affected.

Personal Hygiene: daily habits to prevent foodborne illness (i.e., keeping the hands, hair, and body clean and wearing clean and appropriate uniforms).

Pest Management Plan: a mandatory document in your HACCP plan that provides a brief overview of pest management including the likelihood of occurrence, preventive and corrective actions, control density, and responsible people.

Physical Hazards: foreign objects that can accidentally get into food and contaminate it (e.g., hair, dirt, metal staples, broken glass, and fish bones).

Produce Wash: sometimes referred to as a “veggie wash”, this treatment is a no-rinse chemical wash that reduces pathogens on the surfaces of raw fruits and vegetables.

Ready-To-Eat Foods: foods eaten without further rinsing or cooking (e.g., cut fruits and vegetables, sandwiches, and cheese).

Safe Food: a food free from contamination at every production stage.

Sanitizing: a process that follows cleaning and reduces the number of harmful microorganisms.

Sanitizing Solution: solution containing sanitizer approved for food contact surfaces and prepared with water to the concentration specified by the manufacturer.

Sanitizing Wipe: disposable wipes containing sanitizer to sanitize production equipment.

Shelf-Life: the period of time when food remains effective, useful, and suitable for consumption.

Single-Use or Single-Service Items: any item designed to be discarded after one use (e.g., to-go containers, napkins, and plastic utensils).

Single-Use Gloves: gloves designed for one use. Single-use gloves can inspire a false sense of security when food handlers do not follow basic hygiene rules.

Spore: a thick-walled protective structure produced by certain bacteria and fungi to protect their cells. Spores often survive cooking, freezing, and some sanitizing measures.

Temperature: a critical measurement, measured in Fahrenheit or Celsius, for ensuring food safety and quality.

Temperature Log Sheet: a commonly used checklist in the HACCP plan to ensure that all food is stored at the right temperature. Temperature log sheets can be adhered to the refrigerator, freezer, pantry, and transportation vehicle.

Test Strips: color-changing paper strips used to confirm a sanitizing solution is the correct concentration.

Time and Temperature Control for Safety (TCS) Foods: any foods that can become hazardous in the temperature danger zone for more than four hours.

Toxins: poisons produced by microorganisms, carried by fish, or released by plants (e.g., clostridium botulinum, scombroid toxin).

Utility Sink: a sink that may be lifted or built into the ground with a floor drain designated for mop water and any other waste liquids; also called a mop sink.

Virus: the smallest of the microbial contaminants that typically contaminate foods through a food handler's poor personal hygiene.

Ware-Washing Sink: a sink in which dirty utensils and equipment may be washed.

Waste Management Plan: a mandatory document in your HACCP plan that describes everything related to waste management and how food safety is ensured. The document includes the list of waste, preventive and corrective activities to ensure food safety, the frequency of disposal, and responsible people.

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