

2-5: Safe Food Handling

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Description: The standards presented in this section are based on the current SC Foodservice Rules. Safe food handling addresses the standards to follow to keep food safe from purchasing to service. Standards that address facilities, equipment, cleaning, sanitizing, pest control, and workers are outlined in 2-4: Hygiene, Sanitation, and Facilities Standards.

PURCHASING AND RECEIVING (PR)	MONITORING FREQUENCY
PR1: All food is from an approved source. <i>An approved source is a licensed/permitted food establishment. Whole, uncut fresh produce -- fruits and vegetables -- can be purchased from any source that has been approved by the District Office.</i>	Annual
PR2: Temperature-controlled delivery vehicles are clean and operating at proper temperatures (refrigerator at 39°F or colder and freezer 0°F or colder).	Daily
PR3: Shelf stable food is inspected using the criteria outlined in Table 1: Criteria for Accepting or Rejecting a Food Delivery. <i>Food that is rejected is segregated from all other items until returned to the vendor. A Child Nutrition staff member must be present when foods are delivered.</i>	As needed – note on invoice
PR4: The temperature of refrigerated and cooked foods is taken within ten minutes of delivery using the guidelines outlined in Table 1: Criteria for Accepting or Rejecting a Food Delivery. <i>Refrigerated items must be checked before signing and accepting delivery. Frozen foods are checked to be sure they are rock solid and no water marks appear on the packaging. Food that is not at proper temperature is marked and segregated from all other items until returned to the vendor.</i>	As needed – note on invoice
PR5: No past-dated foods are accepted for use in the operation. This includes foods labeled “Sell By, Expiration Date, Best If Used By, and Use By.”	As needed

DRY STORAGE (DS)	MONITORING FREQUENCY
DS1: Food is stored using the criteria in Table 2: Storage Guidelines for Specific Foods.	Monthly
DS2: Packaged food is labeled with a permanent marker with date received (month/day/year) in a conspicuous location on the package.	Monthly
DS3: A first in, first out (FIFO) procedure is used for all dry food storage.	Monthly
DS4: All food is stored on clean shelving that is at least 6 inches off the floor and away from the wall.	Monthly
DS5: The temperature(s) of the dry storeroom(s) is between 50°F and 70°F and is clean, dry, and well-ventilated.	Monthly
DS6: Food is stored in durable, food-grade containers that are not in direct sunlight.	Monthly
DS7: Opened containers of commercially processed foods are used by the date on the packaged.	Monthly
DS8: Chemicals are completely separated from all food, dishes, utensils, linens, and single-use items.	Monthly
DS9: Non-food supplies and chemicals are in their original containers with label attached. If not in the original container, the item is clearly labeled on the side of the holding container with the name of the contents. <i>Do <u>not</u> label the lid because lids are interchangeable. Some chemical suppliers provide labels.</i>	Monthly

REFRIGERATED STORAGE (RS)	MONITORING FREQUENCY
RS1: Food is stored on clean shelving that is at least 6 inches off the floor. <i>Shelves not lined with foil or other materials.</i>	Monthly
RS2: Packaged food is labeled with a permanent marker with date received (month/day/year) in a conspicuous location on the package.	Monthly
RS3: First in, first out (FIFO) procedure is used for all refrigerated storage.	Monthly
RS4: All food not stored in its original packaging is covered with a food-grade lid, plastic wrap, or aluminum foil and labeled with product name, quantity and month/day/year that it was removed from the original packaging.	Monthly
RS5: The temperature of the refrigerator is at 39°F or colder. The temperature of all potentially hazardous food must be at 41°F or colder. A refrigerator thermometer is on the middle shelf near the door of the refrigerator.	Daily
RS6: CCP -- Cooked and ready-to-eat foods are stored above raw foods in the refrigerator. Foods are stored in this order: • Prepared or ready-to-eat food (top shelf) • Fish, seafood items, eggs • Whole cuts of raw beef and pork • Ground or processed meats • Raw and ground poultry (bottom shelf)	Daily
RS7: Opened containers of non-potentially hazardous commercially processed foods are used by the date on the package.	Daily

FROZEN STORAGE (FS)	MONITORING FREQUENCY
FS1: Hot food is never put directly inside the freezer. Cool all hot food at room temperature for no more than 15 minutes before putting in the freezer. Label cooling food with the month/day/year that it was put into freeze. Use within 30 days or next cycle, whichever is less. NOTE: <i>Frozen food is stored in a manner to allow for good air circulation. Freezers are not to be overloaded with hot foods.</i>	Monthly
FS2: Packaged food is labeled with a permanent marker or a freezer safe sticker with date received (month/day/year) in a conspicuous location on the package. NOTE: Store foods that are being frozen in an area separate from already frozen foods to prevent cross-contamination.	Monthly
FS3: A first in, first out (FIFO) procedure is used for all frozen foods.	Monthly
FS4: All foods not in their original packaging are covered with a food-grade lid, plastic wrap, or aluminum foil and labeled with product name, quantity and month/day/year that it was removed from the original packaging.	Monthly
FS5: If needed, freezers are defrosted according to manufacturer's instructions. NOTE: The manufacturer's instructions should be available for all equipment.	Monthly
FS6: The temperature is 0°F or colder unless the food requires a different storage temperature. A freezer thermometer is placed near the front of the freezer on the top shelf.	Daily

PREPARATION – Thawing (P-T)	MONITORING FREQUENCY
P-T1: One of the following methods is used to thaw frozen foods that are potentially hazardous: in a refrigerator that is at 41°F or colder. Thaw raw meats, raw poultry, and raw fish on the lowest shelf; during the cooking process; in a microwave oven immediately followed by cooking; and under cold running water only under emergency conditions.	As needed
P-T2: Potentially hazardous food that is held above 41°F and less than 135°F for more than four hours is thrown out.	As needed

PREPARATION – Miscellaneous (P-M)	MONITORING FREQUENCY
P-M1: Standardized recipes or standardized procedures are used to prepare all menu items.	Daily
P-M2: Cleaned and sanitized work areas, cutting boards, knives, and utensils are used to prepare food.	Daily
P-M3: Before opening, all lids of cans and jars are wiped with a clean wet cloth that has been immersed in a properly prepared sanitizing solution. <i>Do not use soapy water to wipe cans and jars.</i>	As needed
P-M4: <i>CCP -- No bare hand-contact with any exposed cooked or ready-to-eat foods.</i>	<i>Daily</i>

PREPARATION – Meat, Fish, and Poultry (P-MFP)	MONITORING FREQUENCY
P-MFP1: Only remove as much food as can be prepared within 30 minutes from the refrigerator/freezer. <i>Preparation is defined as cutting, slicing, dicing, breading, or battering. This 30-minute time frame does not include the time needed for cooking.</i>	As needed
P-MFP2: Potentially hazardous foods refrigerated or frozen within 10 minutes after cutting, slicing, dicing, breading, or battering.	As needed

PREPARATION – Salads Containing Potentially Hazardous Ingredients (P-S)	MONITORING FREQUENCY
P-S1: Only remove as much potentially hazardous food as can be prepared within 30 minutes from the refrigerator/freezer. <i>Preparation is defined as cutting, slicing, dicing, and peeling.</i>	As needed
P-S2: <i>CCP -- All ingredients, including those that are not potentially hazardous, are properly cooled to 41°F or colder until they are ready to be mixed. All containers and utensils are chilled before using them to make salad.</i>	Daily
P-S3: <i>CCP -- Raw meat, fish, and poultry are properly cooked (see Table 3) and cooled before adding them to a salad.</i>	Daily

PREPARATION – Eggs and Egg Mixtures (P-E)	MONITORING FREQUENCY
P-E1: Pasteurized shell eggs or pasteurized liquid eggs are used to make egg mixtures and egg-based batters. <i>Pooling shell eggs is not allowed. Pooled eggs are raw unpasteurized eggs that have been cracked and combined together.</i>	As needed
P-E2: Shell eggs can only be used for preparation of single-service items, such as eggs over easy or a single-serving of scrambled eggs	As needed

PREPARATION – Batter and Breading (P-B)	MONITORING FREQUENCY
P-B1: Only batter or bread as much potentially hazardous food as can be prepared within 30 minutes.	As needed
P-B2: When breading food that will be cooked at a later time, refrigerate or freeze within 30 minutes after breading or battering.	As needed
P-B3: Unused batter/breading is thrown out after it has been in the temperature danger zone (41°F to 135°F) for 4 hours or longer.	As needed
P-B4: Only pasteurized shell eggs or pasteurized liquid eggs are used to make batter.	As needed

PREPARATION – Fruits and Vegetables (P-FV)	MONITORING FREQUENCY
P-FV1: Separate cutting boards are used to prepare fruits and vegetables. <i>Preparation is defined as cutting, slicing, chopping, mincing, dicing, and/or peeling.</i>	Monthly
P-FV2: Fruits and vegetables, for which the peel is eaten, are washed under safe running water before cutting, cooking, or combining with other ingredients. <i>Soap and/or sanitizing solution is never used to wash the surface of fruits and vegetables.</i>	Daily
P-FV3: All <u>prepared</u> fruits and vegetables are stored in the refrigerator at 41°F or colder. <i>Prepared is defined as cut, sliced, chopped, minced, diced, or peeled.</i>	Daily
PREPARATION – Ice (P-I)	MONITORING FREQUENCY
P-I1: Safe drinking water is used to make ice.	Annual
P-I2: Ice used to chill food or beverages is never re-used as a food ingredient.	As needed
P-I3: A cleaned and sanitized container(s) and ice scoop(s) is used to dispense ice unless an automatic ice dispenser is available.	Daily
COOKING (C)	MONITORING FREQUENCY
C1: CCP -- All potentially hazardous foods are cooked to temperatures outlined in Table 3: Minimum Safe Internal Cooking Temperatures. If cooked in the microwave, follow the guidelines in Handout 5: Microwave Cooking and Reheating	Daily
C2: Cooking is completed no more than 20 minutes prior to service of the first child.	Daily

HOLDING AND SERVING (HS)	MONITORING FREQUENCY
HS1: All hot-holding equipment is preheated to 150°F or hotter before hot food is placed in the unit.	Daily
HS2: CCP -- All potentially hazardous hot foods must be cooked to the proper temperature before placement in or on a hot-holding unit.	Daily
HS3: CCP -- All potentially hazardous cold foods are at 41 °F or colder before placement on a cold-holding unit. Only full-size or half-size steam table pans or merchandizing trays are used on the cold-holding unit. Cold foods that are in containers or the original packaging are nested directly into a bed of self-draining ice.	Daily
HS4: CCP -- Potentially hazardous foods that are in the temperature danger zone (41 °F to 135 °F) for more than four hours is discarded.	Daily
HS5: Serving utensils are stored in the food for no more than four hours.	Daily
HS6: All unwrapped foods are beneath a properly installed sneeze guard for customer service. All foods not displayed underneath the sneeze guard, such as apples, pears, and peaches, are covered or wrapped with plastic wrap. NOTE: Oranges, bananas, and other fruits that need to be peeled before eating do not need to be individually wrapped.	Daily
HS7: Food that is on the serving line is never mixed with new product. If new product is brought to the serving line and old product is still on the serving line, the new product must be in a separate holding container.	As needed
HS8: CCP - Foods in which that you will use time as a public health control measure must be managed as outline in Handout 6	Daily
HS9: CCP – Date Marking Handout 7	Daily

LEFTOVERS AND PRE-PREPARED FOODS (LPF)	MONITORING FREQUENCY
LPF1: All leftovers on a self-service bar that are <u>not</u> in intact commercial packaging must be discarded at the end of service.	Daily
LPF2: <i>CCP -- Leftovers on the serving line that are at 135°F or hotter OR 41°F or colder are refrigerated and discarded within three days.</i>	Daily
LPF3: <i>CCP -- Leftovers that have been prepared but not placed on the serving line and that are at 135°F or hotter OR 41°F or colder can be frozen for up to one menu cycle. This includes commercially packaged foods removed from its original packaging.</i>	Daily
LPF4: <i>CCP -- Hot foods that are potentially hazardous must be cooled to 41°F or colder by placing the food in shallow pans in a refrigerator or freezer and cooled to 41°F within four hours. NOTE: Large volumes of hot foods are never to be put into the refrigerator or freezer to cool.</i>	Daily
LPF5: All leftover foods in refrigerator and freezer are <u>C</u> overed and <u>L</u> abeled with the <u>A</u> mount and <u>D</u> ate of preparation (CLAD).	Daily
LPF6: Leftovers are reheated using the criteria outlined in Table 4: Minimum Safe Internal Reheating Temperatures. Leftovers are reheated only one time. If leftovers are reheated in the microwave, use the guidelines outlined in Handout 5: Microwave Cooking and Reheating. The remaining food is thrown out after the second use.	Daily
LPF7: Unopened packaged food on a serving line can be re-served if the student is still in the serving line. If an unopened, packaged food is recovered and the food is potentially hazardous, the food must immediately be placed in hot or cold storage.	Daily
LPF8: Unpackaged foods that are delivered to a classroom to be served family style cannot be saved as a leftover.	Daily
LPF9: All pre-prepared foods are <u>c</u> overed and <u>l</u> abeled with the <u>a</u> mount and <u>d</u> ate (CLAD), frozen, and used within one menu cycle. All foods that are pre-prepared must be listed and filed in BINDER 1: Menu Summary and Recipes.	As needed
LPF10: Commercially packaged foods that are opened but the contents not removed from the original packaging must be used by the date stamped on the package. This includes both potentially hazardous and non-potentially hazardous foods.	Daily

TRANSPORTING (T)	MONITORING FREQUENCY
T1: Equipment is properly cleaned and sanitized when returned to the facility.	Monthly
T2: All equipment used for transport is properly cleaned and sanitized before use.	Monthly
T3: The temperature of all potentially hazardous food is taken with a properly calibrated, cleaned and sanitized thermometer before it is loaded into hot-holding or cold-holding equipment.	Daily

MISCELLANEOUS (M)	MONITORING FREQUENCY
T1: A sample of each menu item that was prepared in-house must be saved for seven days in the freezer. See Handout 4: Procedures for Preparing a Sample Tray.	Daily
T2: The temperature of all potentially hazardous food is taken with a properly calibrated, cleaned and sanitized thermometer before it is placed into hot-holding or cold-holding equipment.	Daily
T3: Recall notifications from FDA and USDA must be managed using the following procedures: • Identify the recalled food by matching information from the recall notice to the item. • Remove from inventory • Remove from inventory • Place in secure and appropriate location. • Label so will not get back into inventory. • Refer to vendor's notification or recall notice for what to do.	Daily

Table 1: Criteria for Accepting or Rejecting a Food Delivery

FOOD	Criteria to Accept Delivery
Meat and Poultry	41°F or colder. Stamped with USDA inspection stamp. Good color and no odor. Packaging clean and in good condition and no signs of tampering and/or counterfeiting. Not past dated.
Seafood	41°F or colder. Good color and no off-odors. Packaging clean and in good condition and no signs of tampering and/or counterfeiting. Not past dated.
Fresh Produce	Clean and good condition and no signs of tampering and/or counterfeiting. If produce is cut or processed, it is at 41°F or colder.
Dairy Products	41°F or colder. Packaging clean and in good condition and no signs of tampering and/or counterfeiting. All products are pasteurized. Not past dated.
Eggs	Shell eggs at 45°F or colder; liquid eggs at 41°F or colder. Shell eggs -- clean and un-cracked; frozen, and dry eggs – pasteurized. Packaging clean and in good condition and no signs of tampering and/or counterfeiting. Not past dated.

FOOD	Criteria to Accept Delivery
Refrigerated and Frozen Processed Food	41°F or colder; if frozen, the product is rock solid. Packaging clean and in good condition and no signs of tampering and/or counterfeiting. Not past dated.
MAP	If the product requires refrigeration, it is at 41°F or colder. Packaging clean and in good condition and no signs of tampering and/or counterfeiting. Labels can be read and attached to the product. Not past dated.
Canned Food	No swollen ends, leaks, rust, or dents. Label can be read and is attached to the product. No signs of tampering and/or counterfeiting. Not past dated.
Dry Foods	Packaging clean and in good condition and no signs of tampering and/or counterfeiting. No signs of pest infestation. Not past dated.
UHT	Packaging clean and in good condition and no signs of tampering and/or counterfeiting. If product requires refrigeration, it is at 41°F or colder. Label is attached and can be read. Not pasted dated.
Baked Goods	Packaging clean and in good condition and no signs of tampering and/or counterfeiting. Products are not moldy. Not past dated.
Potentially Hazardous Hot Foods	Temperature at 135°F or hotter. Holding containers are clean and in good condition and no signs of tampering and/or counterfeiting.

Table 2: Storage Guidelines for Specific Foods

Food	Temperature	Other Requirements
Meat	41°F	Tightly wrap or place it in a deep container.
Poultry	41°F	Store ice-packed poultry in self-draining containers. Change ice often and sanitize the container regularly.
Fish	41°F	Tightly wrap or store in original packaging.
Shell eggs	41°F	Use within 4-5 weeks of the packing date.
Dairy	41°F	Discard if past the use-by or expiration date.
Ice cream and frozen yogurt	6°F-10°F	Discard if past the use-by or expiration date.
Fresh produce	Temperature varies	If delivered packed on ice, store that way.
MAP, vacuum packed, and sous vide packaged food	41°F	Discard if past the use use-by or expiration date.
UHT products, aseptically packaged	50°F-70°F	Once opened, store all UHT at 41°F or colder. Read the label to determine if the product needs to be refrigerated.
UHT products not aseptically packaged	41°F	Store above raw foods. Read the label to determine if the product needs to be refrigerated.
Canned/dry food	50°F-70°F	If removed from its original packaging, store in airtight, clearly labeled containers.

Table 3: Minimum Safe Internal Cooking Temperatures

Food	Minimum internal temperature
Poultry	165°F
Stuffing and stuffed meat	165°F
Dishes that include potentially hazardous ingredients	165°F
Ground meats (including beef, pork, or fish)	155°F
Injected meats (including brined ham and flavor-injected roasts)	155°F
Pork and beef	145°F for steaks/chops 155°F surface temperature for roasts
Fish, whole or fillets (fresh)	145°F
Stuffed fish	165°F
Ground, chopped, or minced fish	155°F
Eggs (shell, liquid, or powdered)	145°F
Fruits, vegetables, or fruit and vegetable-based dishes that will be hot-held	135°
Commercially processed food ^A to be hot-held	135°
Potentially hazardous food cooked in a microwave oven	165°F

^A The package must state that the product is “fully cooked.” If it is not labeled “fully cooked” then the fresh food temperature above must be used for final cooking.

Table 4: Minimum Safe Internal Reheating Temperatures

Food	Temperature and Time	Time to Reach Temperature
Potentially hazardous food that have been properly cooked and cooled. This includes commercially processed foods ^A that have been heated and cooled once in the operation.	165°F for 15 seconds	2 hours

^A When a package of commercially processed food is opened and heated in a foodservice operation, this is considered to be an initial heat process rather than a reheat process. In fact, commercially processed foods labeled “fully cooked” are safe to eat without any heat treatment. However, any leftovers of commercially processed foods that have been heated and cooled in the operation must be reheated to 165°F.

Table 5: Foods Exempt from the Buy American Rule

Bananas
Beef extract
Beef, corned, canned
Brazil nuts
Capers
Cashew nuts
Caster beans and oil
Chestnuts
Chile peppers
Cocoa beans
Coconut or coconut meat
Coffee
Mandarin oranges
Olive oil
Olives, green
Pineapples
Spices and herbs in bulk
Sugars, raw
Tapioca flour
Tea, in bulk
Thyme oil
Vanilla beans

Handout 1: Procedures for Calibrating Bi-metallic/Metal-stem Food Thermometers

Accurate temperature readings are critical to the success of a HACCP Plan. Therefore, all thermometers, including those that are used to measure food temperatures and those that are used to measure air temperature, must be calibrated on a scheduled basis to determine how accurate the thermometer is reading temperatures. Calibration is the process of verifying the accuracy of a thermometer.

Calibrating Food Thermometers (Bimetallic/Metal-stem Thermometers)

Read the manufacturer's instructions to determine how to calibrate your thermometers. Some types must be returned to the manufacturer to be calibrated. Calibrate all food thermometers at least once a day or every time it is dropped. Two accepted methods for calibration are the boiling-point method and ice-point method. Both are described below.

Boiling-point method (This method can only be used if your elevation is 1,000 feet or less. If you do not know your elevation, it is best to check the accuracy of your thermometers using the ice-point method.)

1. Boil clean tap water in a deep pot.
2. Put the thermometer stem or probe into the boiling water so the sensing area is completely submerged.
3. Wait 30 seconds or until the indicator stops moving.
4. If the temperature is at 212°F then remove the thermometer. It is ready for use.
5. If the temperature is not at 212°F, hold the calibration nut securely with a wrench or other tool and rotate the head of the thermometer until it reads 212°F or the appropriate boiling-point temperature for your elevation.

Ice-point method (preferred method)

1. Fill a large container with crushed ice. Add clean tap water until the container is full.
2. Put the thermometer stem or probe into the ice water so the sensing area is completely submerged. Wait 30 seconds or until the indicator stops moving.
3. If the temperature is at 32°F, remove the thermometer. It is ready for use.
4. If the temperature is not at 32°F, then hold the calibration nut securely with a wrench or other tool and rotate the head of the thermometer until it reads 32°F.

Handout 2: Temperatures and Your HACCP Plan

1. **CALIBRATION:** Check the accuracy all thermometers at the beginning of each production day. Record the temperature and corrective action, if completed, on the Daily – Thermometer Calibration Log.
2. **RECEIVING:** Check the temperature of all potentially hazardous foods when they are delivered using an infrared thermometer. Bi-metallic stemmed and digital thermometers can also be used. Record any temperature violations directly on the invoice.
3. **REFRIGERATED STORAGE:** Put an appropriate thermometer inside your cold storage equipment (freezer and cooler) to monitor and validate outside thermometer gauge readings. The thermometer must be located on a middle shelf near the front of the unit. Record the temperature twice daily on the Daily – Refrigerator Inspection form.
4. **DRY STORAGE:** A thermometer must also be located in your dry storage area. Check the temperature of the dry storeroom once each day. Record on the Daily – Store Room form.
5. **COOKING:** Take the temperature of all foods immediately after they are removed from cooking equipment, such as the stove, oven, and fryer.
 - a. **PANS OF FOOD COOKED ALL AT ONCE:** Check the temperature in every pan in at least two places near the middle of the pan. Record the lowest “safe” temperature for all temperature taken on the Daily Production Record.
 - b. **BATCH COOKING:** Check the temperature in the center of each batch in two locations. Record the lowest “safe” temperature of the first batch on the Daily Production Record. The temperature MUST be measured in every batch of food prepared after the initial batch but only the initial temperature is recorded on the Daily Production Record.
 - c. **CORRECTIVE ACTION FOR COOKING:** If the temperature of the food is not safe, continue to cook the item until it reaches a safe temperature. A food that has not reached a safe temperature should NEVER be placed in the hot-holding unit or on the serving line.
6. **COLD FOODS:** Take the temperature of all cold foods immediately before placing on the serving line. Record the warmest “safe” temperature on the Daily Production Record.
7. **HOT-HOLDING CABINET:** The temperature of the hot-holding cabinet must be checked at the beginning of the day. It must be at 150°F or hotter. Record the temperature of the hot-holding cabinet on the Daily – Hot-Holding Unit Inspection form.

8. **FOODS IN A HOT-HOLDING CABINET:** After cooking is complete, foods are often placed in a hot-holding cabinet. No properly cooked food should be placed in a hot-holding cabinet that is not operating at 150°F or hotter. Take the temperature of all foods prior to putting them on the serving line. You do not need to record the temperatures of foods being placed on the *serving line as long as that food was cooked to the correct temperature and placed into a piece of holding equipment that has been brought to the correct temperature (hot-holding units must be at 150°F or hotter and cold-holding units (including refrigerators) must be at 39°F or colder)*
9. **LEFTOVERS:** Prior to saving foods as a leftover, take the temperature. If the food is in the temperature danger zone (41 F to 135°F), throw it out, it cannot be safely saved as a leftover. Record the temperature of leftovers on the Daily Production Record.
- a. **LEFTOVERS ON A SELF-SERVE LINE:** Unpackaged foods that are on a self-serving line cannot be saved regardless of the temperature.
 - b. **LEFTOVERS ON A SERVING LINE:** Foods that were on the serving line and only served by operators can be properly cooled and refrigerated for three days.
 - c. **LEFTOVERS IN A HOT-HOLDING UNIT:** Foods held in a hot-holding unit can be frozen until the next time that food is on the menu or 30 days whichever comes first.
10. **COOLING COMPLEX FOODS:** The temperature of complex foods must be monitored and temperatures recorded on the Complex Foods Temperature Log. Leftovers are NOT complex foods so the cooling of leftovers does not need to be recorded on the Complex Foods Temperature Log. Complex foods must be cooled using one of two methods:
- a. from 135°F to 41°F within four hours OR
 - b. from 135°F to 70°F within two hours and to 41°F within four hours.
11. **REHEATING:** Check the temperature of foods during reheating to be sure food reaches 165°F or hotter within two hours.
- * Record the lowest “safe” temperature on the Daily Production Record when you check cooking temperatures. When you reheat foods as a corrective action, record this in the Comments section of the Daily Production Record.

Handout 3: Procedures for Measuring Food Temperatures

Temperature readings will only be correct if the thermometer is placed in the proper location in the food. If not inserted correctly or placed in the wrong area, the reading on the food thermometer will not accurately register the internal temperature of the food. In general, place the food thermometer in the thickest part of the food, away from bone, fat, or gristle.

Before using a food thermometer, read the manufacturer's instructions. The instructions should tell how far the thermometer must be inserted in a food to give an accurate reading. If instructions are not available, check the stem of the food thermometer for an indentation, or "dimple." This shows one end of the location of the sensing device. Dial thermometers must be inserted about 2 to 3 inches into the food. For most digital thermometers, one only needs to a small area of the tip to get an accurate reading. Clean and sanitize the stem of your thermometer before use.

Where to Place the Thermometer

Meat. When taking the temperature of beef, pork, or lamb roasts, place the food thermometer midway in the roast, away from the bone. When cooking hamburgers, steaks, or chops, insert a thermistor or thermocouple in the thickest part of the meat, away from bone, fat, or gristle. If using a bimetallic stemmed thermometer, see "Thin foods" below. When cooking irregularly shaped food, such as a beef roast, check the temperature in several places.

Poultry. When cooking whole poultry, the food thermometer should be inserted into the thickest part of the thigh (avoiding the bone). If the poultry is stuffed, the center of the stuffing should be checked after the thigh reads 180°F, stuffing must reach 165°F. If cooking poultry parts, insert food thermometer into the thickest area, avoiding the bone. The food thermometer may be inserted sideways if necessary. When the food is irregularly shaped, the temperature should be checked in several places.

Thin foods. When measuring the temperature of a thin food, such as a hamburger patty, pork chop, or chicken breast, use a thermistor or thermocouple food thermometer if possible. However, if an "instant-read" dial bimetallic-coil food thermometer is used, the probe must be inserted into the side of the food so that entire sensing area (usually 2-3 inches) is positioned through the center of the food. To avoid burning fingers, it may be helpful to remove the food from the heat source (if cooking on a grill or in a frying pan) and insert the food thermometer sideways after placing the item on a clean spatula or plate.

Combination dishes. For casseroles and other combination dishes, place the food thermometer into the thickest portion of the food or the center of the dish. Egg dishes and dishes containing ground meat and poultry must be checked in at least two places.

Handout 4: Procedures for Preparing a Sample Tray

PURPOSE

A sample food tray can be used to prove or disprove that a food prepared in a school kitchen caused foodborne illness. Consequently, it is critical that proper collection and storage procedures be followed to assure the integrity of the food collected.

Per the SC School HACCP Plan, all South Carolina schools are required to collect samples of all foods prepared in the school kitchen each day. This requirement applies to both potentially hazardous and non-potentially hazardous foods. You do not need to save a sample of any unopened, commercially packaged foods that are served or displayed, such as packaged cookies/snacks, bottled beverages, juice, milk or tea.

EQUIPMENT AND SUPPLIES:

- Disposable sectioned trays (alternatively, you can use 4-ounce plastic or Styrofoam cups with lids)
- Saran plastic wrap OR Heavy-duty aluminum foil
- Wide point permanent marker
- Kitchen utensils -- spoon, knife, and/or fork

SAMPLE TRAY PROCEDURE:

1. Collect disposable sectioned trays. Be sure that all sectioned trays have been stored in a clean environment before use. Use the minimum amount of trays for collection of food samples. If more than one tray is needed, then try to collect hot samples on one tray and cold ones on another.
2. Using a properly cleaned and sanitized kitchen utensil, portion out a sample that is *at least* 1.75 oz (¼ cup OR 50 g) of the first batch of every food immediately before placement in the hotbox or on the serving line. For whole foods, such as hamburgers, chicken nuggets, or pizza, save one piece of the food. You do NOT need to collect a sample of commercially packaged foods that are served on a given day.
3. After collecting the samples, cover the sectioned tray with Saran plastic wrap OR heavy duty aluminum foil.
4. Label the plastic/foil, using a permanent black marker, with the following information:
 - Hot, cold, or room temperature (RT)
 - Date and time of collection. Include the day of the week in capital letters (MONDAY) so it is easier to know when to the contents a tray.
 - Names of food in the tray
 - Initials of sample collector
5. Store samples for seven days in a freezer that is operating between 0 and 10 °F.
6. Throw out samples that are more than seven days old. Hold from Monday to Monday, Tuesday to Tuesday, etc. Throw away at end of day, when you check the freezer for the last time.

FOODS	SAMPLE AMOUNT	OBSERVATIONS
Cooked Dishes		
Meats, poultry and seafood	Individual patties, rolls, nuggets and such	Use amount necessary to fill in one of the sections. You do not need to weigh the sample.
Stews, other meat preparations, such as BBQ pork	1.75 oz (¼ cup)	Fill in one of the sections making sure that your sample includes most of the ingredients in the mix (liquid, meat, vegetables).
Pastas, includes lasagna	1.75 oz (¼ cup) including meat, if any	Fill in one of the sections making sure that your sample includes most of the ingredients in the mix (pasta, meat, vegetables).
Pizza	One slice	Save one whole slice in a freezing bag or in a freezer container properly labeled as indicated above.
Rice dishes	1.75 oz (¼ cup) including vegetables and meat, if any	Fill in one of the sections of the tray.
Produce		
Fruits and vegetables handled in-house (sliced, cut, etc.)	1.75 oz (¼ cup) or a single unit, depending on initial size	Save the amount of sliced/cut fruits and vegetables enough to fill in one of the sections. You do not need to save samples of whole fruits, such as bananas. Do not consider washing as part of the food preparation, this is, you do not need to save samples of vegetable or fruits that you only wash before display, such as whole apples.
Desserts		
Cookies, brownies, cake made in-house	1.75 oz (¼ cup) or a single unit, depending on product.	Do not take sample if served directly from container. Save one unit or ¼ cup of every dessert prepared in-house.

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Handout 5: Microwave Cooking and Reheating

COOKING

- Remove food from its packaging and put on microwave safe tray before cooking.
- Cover dish with a lid/plastic wrap. Allow enough space between food and top of dish so plastic wrap does not touch the food. Loosen or vent lid or wrap to allow steam to vent.
- Stir, rotate, or turn food upside down (where possible) midway through the microwaving time.
- Follow cooking instructions on product label (or recipe instructions).
- Observe “standing time.” Cooking continues and is completed during standing time.
- Check food temperature. Unless the thermometer is labeled safe for microwave cooking, do not leave the thermometer in the food during microwaving.
- Let stand at least 3 minutes to complete cooking process.

THAWING IN THE MICROWAVE

- Select “defrost” setting or 30% power. Rotate and turn food upside down when possible. Never hold partially cooked food to use later.

REHEATING

- Cover foods with a lid or a microwave-safe plastic wrap. Turn back corner for the steam to vent.
- After reheating foods in the microwave oven, allow standing time.
- Only use cookware that is specially manufactured for use in the microwave oven.

MICROWAVE SAFE CONTAINERS

Safe to Use:

- Any utensil labeled for microwave use; heatproof glass (i.e., Pyrex) or glass-ceramic (such as Corning Ware); white, unprinted paper plates, towels, napkins and bags; or wax paper, parchment paper, heavy plastic wrap.

Not Safe to Use:

- Cold storage containers--margarine tubs, cottage cheese and yogurt cartons.
- Brown paper bags, newspapers, or aluminum foil
- Metal pans or china with metallic paint or trim
- Foam-insulated cups, bowls, plates or trays
- Take out containers with metal handles
- Metal “twist ties” on package wrapping

Handout 6: Time as a Public Health Control Measure

Using Time Alone as a Public Health Control to Limit Bacteria Growth in TCS (Potentially Hazardous) Foods – Standard Operating Procedures

HAZARD ANALYSIS: Pathogenic bacteria can grow in TCS foods (also called potentially hazardous foods) that are displayed or held for service for immediate consumption. Combination foods (those consisting of TCS and non-TCS foods) are classified as TCS foods unless proven otherwise.

CRITICAL CONTROL POINT: TCS foods to be served hot can be out of temperature control for **up to four hours**. TCS foods to be served cold can be out of temperature control for **up to six hours**. Temperature control is defined as keeping hot TCS foods at 135°F or hotter and cold TCS foods at 41°F or colder.

PROCEDURES FOR USING TIME ALONE AS A PUBLIC HEALTH CONTROL:

1. Identify all TCS menu items for which you will use time alone as a public health control when displaying or holding for service for immediate consumption. **NOTE:** *On a given day, there might be foods on a serving line that are kept safe using time alone as a public health control and foods that are kept safe using temperature as a public health control. These guidelines do NOT apply to foods in which temperature control is used to keep foods safe.*
2. Note on the standardized recipe or standardized procedure that you will use time alone as a public health control when serving the food.
3. Immediately before putting the item on the serving line, write with a permanent black marker on masking tape (or labels that are already available) the following information:
 - The time the food was removed from temperature control (such as refrigerator, cooking device (stove/oven/fryer), or hot-holding unit).
 - The time the food must be served. **NOTE:** *The time limit cannot exceed four hours for foods to be served hot and six hours for foods to be served cold. Once the food reaches the marked time limit, it must be thrown out.*
4. Secure the masking tape (or label) to the side of the holding container. Labels are put on the pan when the pan is removed from the warmer or the refrigerator. **NOTE:** *No label should be on the pan unless the pan is removed from warmer and is going to be immediately put on the serving line.*
5. Once you use time alone as a public health control, the food cannot be returned to the refrigerator or freezer for later use or reheated, it must be thrown out.

MONITORING:

- Each hour, one worker must visually check the labels to ensure no food has exceeded the four-hour time limit. Once a food has exceeded the four-hour limit, it must be discarded.

RECORDS:

- The amount of each menu item that is discarded must be noted on the production record.

CORRECTIVE ACTION:

- A TCS food that is out of temperature control must be discarded when:
 - It has no time marking while it is on the serving line.
 - The time marked on the container has exceeded 4 hours.

VERIFICATION:

- The site manager will verify:
 - All containers of TCS food is properly marked while on the serving line.
 - Marked hot and cold food is discarded within 4 hours.

Handout 7: Date Marking

Date Marking TCS (Potentially Hazardous) Food, and Ready-to-Eat Food

HAZARD ANALYSIS: To ensure proper rotation of TCS ready-to-eat foods (RTE) foods (also called potentially hazardous foods) to prevent or foodborne disease.

CRITICAL CONTROL POINT: A TCS RTE food must be date marked *if* the food is to be stored under refrigeration for more than 24 hours.

PROCEDURES FOR DATE MARKING:

1. Identify TCS RTE foods to be held at 41°F or colder for more than 24 hours. Label the holding container with the name of the food, date and time it was prepared or opened, and the date it must be eaten, sold, or thrown out. Example of how to date mark food:
 - “cut cantaloupe, prepared 5/26/15, 8:00 a.m. discard 5/28/15”
2. Label TCS RTE foods that are prepared on-site and held for more than 24 hours.
3. Label any processed, TCS RTE foods when opened, if they are to be held for more than 24 hours.
4. Refrigerate all TCS RTE foods at 41 °F or colder.
5. Serve or discard refrigerated, TCS RTE within three days.

MONITORING:

- Once each day, one worker must visually check the labels to ensure no food has exceeded the three-day limit. Once a food has exceeded the three-day limit, it must be discarded.

RECORDS:

- The amount of leftover menu items must be noted on the production record on the day that the food was prepared.

CORRECTIVE ACTION

- Discard TCS RTE foods that are not date marked or that exceed the 3-day time period.

VERIFICATION

- Staff will verify:
 - All TCS RTE foods held for under refrigeration at 41°F or colder for more than 24 hours is date marked.
 - TCS RTE foods that are not date marked or that exceeds the three-day limit are discarded

****Note: While DHEC allows for the minimum requirement of 7 days South Carolina Department Education Office of Health Nutrition has set a higher standard of three days.***

ITEMS NOT REQUIRING DATE MARKING

Some foods prepared and packaged in an inspected food processing plant do not require date marking. These foods include:

- Semi-soft cheeses
- Hard cheeses
- Cultured dairy products, such as yogurt, sour cream and buttermilk
- Preserved fish products, such as pickled herring and dried or salted cod
- Shelf-stable dry fermented sausages, pepperoni and salami
- not labeled as “keep refrigerated”