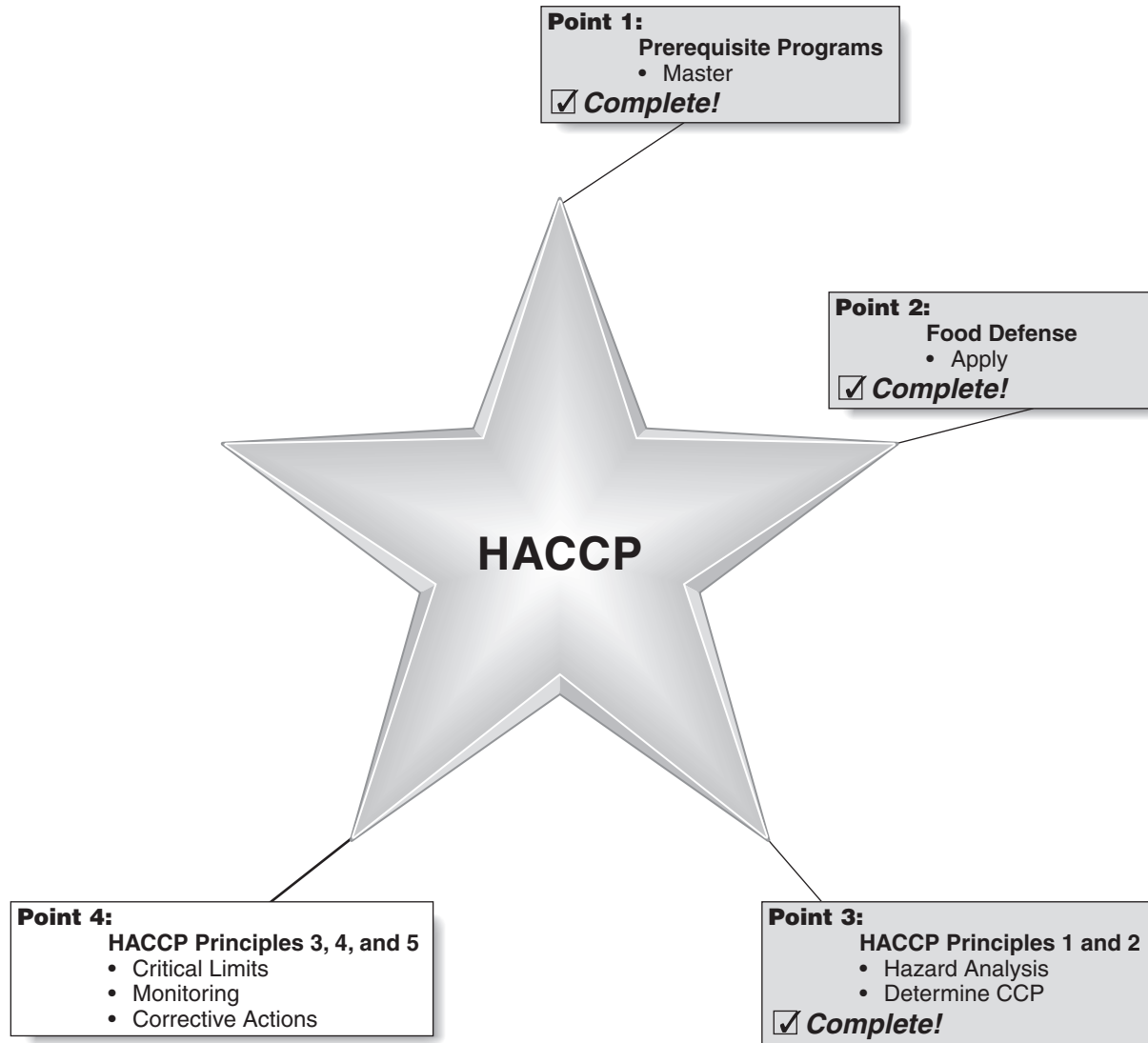


HACCP STAR POINT 4

Work the Plan



In Star Point 4, we will discuss minimum and maximum times and temperatures for the critical control points covered in the previous chapter. This is the most important Star Point because this is where you “work the plan” through monitoring times and temperatures and taking the appropriate corrective actions to keep food safe.



Star Point Actions: You will learn to

- ★ Establish critical limits (HACCP Principle 3).
- ★ Define monitoring procedures (HACCP Principle 4).
- ★ Determine corrective action (HACCP Principle 5).

★ PRINCIPLE 3: ESTABLISH CRITICAL LIMITS



PRINCIPLE 3

Now that we have completed the hazard analysis and identified control points and critical control points, the next step is to look at critical limits. A **critical limit** is the scientific measurement that must be met for each critical control point. A critical limit is like a traffic speed limit on a major highway. There is always a maximum speed. If you exceed the maximum speed and get stopped, you receive a ticket. Critical limits are the same in food preparation; if you don't cook the food to a specific temperature, people may be stopped with a foodborne illness.

A critical limit must be scientific, measurable, and specific and it must clearly indicate what needs to be done. For example, if a recipe for baked chicken says "cook until done" or "cook until juices run clear," is the product really safe to eat? The correct critical limit should be "cook to an internal temperature of 165°F (73.9°C) for 15 seconds." Why? Scientific data from the U.S. Food and Drug Administration Model Food Code provides us with documentation that proves our customers won't get sick if chicken is cooked to the designated temperature.

What can be measured? Definitely time and temperature! Each PHF/TCS food has a minimum internal cooking temperature that must be reached and held for 15 seconds to ensure that it is safe and does not make anyone sick.

Here is a familiar list of critical limits to help reinforce the important minimum times and temperatures needed to destroy the pathogens on food and control foodborne illness outbreaks. Other critical limits depending on your operation could be: humidity, water activity (moisture content), and acidity.

Minimum Temperatures

165°F (73.9°C) for 15 Seconds

- ★ Reheat all leftover foods.
- ★ Cook all poultry.
- ★ Cook all stuffed products, including pasta.
- ★ Foods cooked in a microwave, then let sit for 2 minutes.
- ★ When combining already cooked and raw PHF/TCS products (casseroles).

155°F (68.3°C) for 15 Seconds

- ★ Cook all ground: fish, beef, and pork.
- ★ Cook all flavor-injected meats.
- ★ Cook all eggs for hot holding and later service (buffet service).

★ STAR KNOWLEDGE: CRITICAL LIMIT EXERCISE

Complete the critical limit exercise in the space provided.

1. If holding is the CCP for tuna salad, what is the critical limit? _____
2. If cooking is the CCP for a hamburger, what is the critical limit? _____
3. If holding is the CCP for a hamburger, what is the critical limit? _____
4. If cooking is the CCP for chicken soup, what is the critical limit? _____
5. If reheating is the CCP for chicken soup, what is the critical limit? _____
6. If cooling is the CCP for chicken soup, what is the critical limit? _____
7. If holding is the CCP for chicken soup, what is the critical limit? _____
8. If storage is the CCP for ice cream, what is the critical limit? _____
9. If cooking in the microwave is the CCP for fish, what is the critical limit? _____
10. If cooking is the CCP for a pork roast, what is the critical limit? _____

145°F (62.8°C) for 15 Seconds

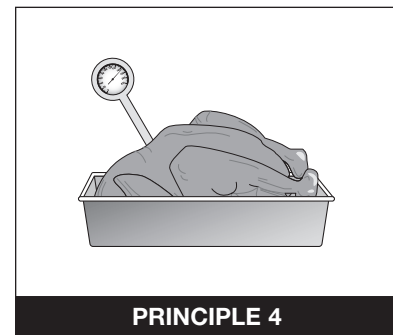
- ★ Cook all fish and shellfish.
- ★ Cook all chops/steaks of veal, beef, pork, and lamb.
- ★ Cook fresh eggs and egg products for immediate service.
- ★ Cook roasts to 145 °F for **4 minutes**.

135°F (57.2°C) or 15 Seconds

- ★ RTE foods.
- ★ Fully cooked commercially processed products.
- ★ Cook or hold vegetables, and fruits.
- ★ Hot holding for all PHF/TCS.

★ PRINCIPLE 4: ESTABLISH MONITORING PROCEDURES

Monitoring procedures ensure that we are correctly meeting critical limits for the CCPs. This is the foundation for HACCP Principle 4. If we do not regularly check the CCPs, our HACCP plan can easily fall apart. Monitoring enables the manager to determine if the team is doing its part to keep food safe. Monitoring also helps to identify if there are equipment problems, product concerns, or refrigeration issues. This is by far the area in which you can shine the most as a HACCP team member—you make the difference in terms of whether or not your operation is serving safe food.



PRINCIPLE 4

■ HOW TO MONITOR?

Your manager has established monitoring procedures for a successful monitoring program. It is important to know your role and the roles of other team members.

- ★ Who will monitor the CCP(s)?
- ★ What equipment and materials are needed?
- ★ Are you following SOPs?
- ★ When should monitoring take place?
- ★ How often should monitoring take place?
- ★ How will the CCP(s) be monitored?

There are two kinds of monitoring:

- ★ Continuous
- ★ Noncontinuous

Continuous monitoring is a constant monitoring of a CCP. This is done with built-in measuring equipment that records time and temperatures. Computerized equipment systems are an example of continuous monitoring.

Noncontinuous monitoring is primarily what the majority of foodservice operations use. This monitoring occurs at scheduled intervals. An example of noncontinuous monitoring is using a properly calibrated bimetallic thermometer to measure the temperature of chicken soup every 2 hours.

■ BE A MONITORING STAR

- ★ Request to be trained on monitoring procedures.
- ★ Know how to use monitoring tools, thermometers, and so on.
- ★ Know the proper temperatures.
- ★ Know other critical limits.
- ★ Record monitoring results in logs.
- ★ Perform monitoring tasks for example every 2 hours or every 4 hours.

■ USE MONITORING FORMS

In the HACCP system, proper documentation must be kept throughout the operational food flow. Effectively using monitoring forms at receiving, preparation, cooking, cooling, reheating, and storage stages provide a product history. This verifies that a product meets standards or indicates when adjustments to the system are needed. It also ensures that you have done all you can do to keep the food safe if a foodborne illness outbreak occurs. These records become your documentation to the Department of Health; the media; and local, county, state, and federal food inspectors.

Equipment temperatures during meal preparation and service should be monitored at least every 4 hours; this includes all refrigeration, cooking, and holding equipment. If necessary, adjust the equipment thermostats so products meet the required temperature standards.

Other types of documentation include standard operating procedures, sanitation practices, employee practices, and employee training. This may be an informal notation of observations concerning what is working well and what is not working well. This documentation identifies practices and procedures that may have to be modified and may indicate a need for additional employee training.

Monitoring (Sample SOP)

1. Inspect the delivery truck when it arrives to ensure that it is clean, free of putrid odors, and organized to prevent cross-contamination. Be sure refrigerated foods are delivered on a refrigerated truck.
2. Check the interior temperature of refrigerated trucks.
3. Confirm vendor name, day and time of delivery, as well as driver's identification before accepting delivery. If the driver's name is different than what is indicated on the delivery schedule, contact the vendor immediately.
4. Check frozen foods to ensure that they are all frozen solid and show no signs of thawing and refreezing, such as the presence of large ice crystals or liquids on the bottom of cartons.
5. Check the temperature of refrigerated foods.
 - a. For fresh meat, fish, dairy, and poultry products, insert a clean and sanitized thermometer into the center of the product to ensure a temperature of 41°F or below.
 - b. For packaged products, insert a food thermometer between two packages, being careful not to puncture the wrapper. If the temperature exceeds 41°F, it may be necessary to take the internal temperature before accepting the product.
 - c. For eggs, the interior temperature of the truck should be 45°F or below.
6. Check dates of milk, eggs, and other perishable goods to ensure safety and quality.
7. Check the integrity of food packaging.
8. Check the cleanliness of crates and other shipping containers before accepting products. Reject foods that are shipped in dirty crates.

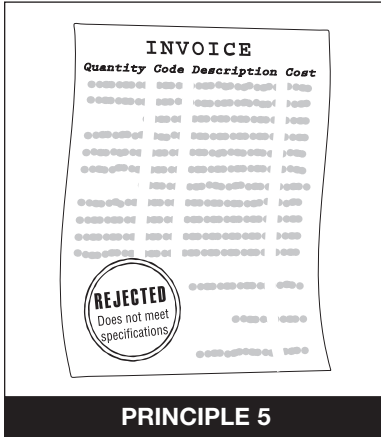
Examples of Monitoring Forms

THERMOMETER CALIBRATION LOG: (ONCE PER SHIFT)

	DATE	EMPLOYEE	DATE	EMPLOYEE	DATE	EMPLOYEE
6 AM						
2 PM						
10 PM						
MGR ✓						

PRINCIPLE 5: IDENTIFY CORRECTIVE ACTIONS

Now that the minimum and maximum limits have been identified and met through your monitoring, we can identify the corrective actions necessary to fix the deficiencies. The **corrective actions** are predetermined steps that you automatically take if the critical limits are not being met. This is also HACCP Principle 5. Following are examples of corrective actions:



- ★ Reject a product that does not meet purchasing or receiving specifications.
- ★ Reject a product that does not come from a reputable source.
- ★ Fix thermometers on refrigerators, freezers, ovens, hot holding carts, and so on.
- ★ Discard unsafe food products.
- ★ Discard food if cross-contamination occurs, especially if there is no cooking step.
- ★ Continue cooking food until it reaches correct temperature.
- ★ Reheat food to 165°F (73.9°C) for 15 seconds within 2 hours.
- ★ Change methods of food handling.
- ★ Train staff to calibrate thermometers and take temperatures properly.

Document: Write Everything Down!

Don't forget to record what you have done to correct the problems you have observed when monitoring. This practice is important and helpful if a customer is stricken with a foodborne illness. You will need these documents as evidence of implementation of your HACCP system.

In Star Point 4, we discussed why this is the most important Star Point for you. This is where **you make the greatest difference!** You do that by “working the plan”—by monitoring, identifying, and facilitating corrective actions that in turn make food safe.

Sample SOP: Receiving Deliveries

Corrective Action:

1. Reject the following:
 - a. Frozen foods with signs of previous thawing
 - b. Cans that have signs of deterioration – swollen sides or ends, flawed seals or seams, dents, or rust
 - c. Punctured packages
 - d. Expired foods
 - e. Foods that are out of safe temperature zone or deemed unacceptable by the established rejection policy



STAR KNOWLEDGE: CORRECTIVE ACTION EXERCISE

The cook is preparing chicken soup that was made the previous day. She started to heat the soup at 8 a.m. in the jacketed steam kettle. She forgets to check the soup until 9:30 a.m., when she finds that the soup has reached 150°F (65.6°C). What does she need to do to be sure that the soup reaches the correct temperature for reheated foods? What could have caused the problem?

