



## Hazard Analysis Critical Control Point (HACCP) Plan

### How to Create a Plan

#### *Preliminary Steps*

1. **Assemble a HACCP team**, including one person who is trained in HACCP principles. Although this may seem like a daunting task, especially for a very small or family-centered company, it is best to have more than one person working on the development of the HACCP system(s). HACCP is an overall process control system and it takes a variety of knowledge and experience to create a good system. If your company has only a few people in it, they may all need to be on the HACCP team.
2. **Standard Operating Procedures**, commonly called SOPs, are detailed sets of instructions, steps, or procedures that control the operational conditions within a food establishment, which allow for environmental conditions favorable to the production of safe food. These written procedures are often equivalent to prerequisite programs of HACCP. The following are examples of SOPs.
  - No bare hand contact with ready-to-eat foods
  - Designated and segregated work area
  - Cleaning and sanitizing ROP areas
  - Employee training
  - Labeling and sample of your labels
  - Refrigeration data logger
  - How you will conduct record keeping
  - Proper hand washing
  - How to cook food products
  - How to calibrate a probe food thermometer
3. **Describe the food and its method of production and distribution**; identify the intended use and the intended consumers of the food products. This must include every step in the food production process. Use these questions to help ensure that all of the key information in the food production process is included.
  - Do I have a standard recipe?
  - What is the common name of the product?
  - How is the product to be used?
  - What type of packaging encloses the product?
  - What is the length of shelf life of each product and at what temperature?
  - Where will the product be sold?
  - Who is the intended consumer of the product?
  - What is the intended use?
  - What labeling instructions are needed?
  - Is special distribution control needed?

4. **Develop and verify the process flow diagram.** A chart that documents the flow of the food product through your facility from receiving to serving to the customer, identifying the steps that are Critical Control Points. A flow diagram is a picture of a process. The diagram does not to be created on a computer, but it does need to be an accurate, clear sketch of the process used in your facility to make the product. An example flow diagram might include, but is not limited to, the following steps:

- Receiving ingredients
- Thawing
- Marinating
- Grinding/mixing/blending
- Cooking procedure
- Cooling procedures/freezing
- Packaging
- Storing
- Distributing
- Reheating
- Serving

5. **Conduct a Hazard Analysis.** A hazard analysis consists of the following:

- A chart that documents the operational steps food will go through in your facility,
- The potential hazards; biological, chemical, physical
- Answering whether the hazards are significant in your facility
- Justification for that answer
- Listing the control measures that can be applied to prevent the significant hazards
- Answering whether this step will be considered a Critical Control Point

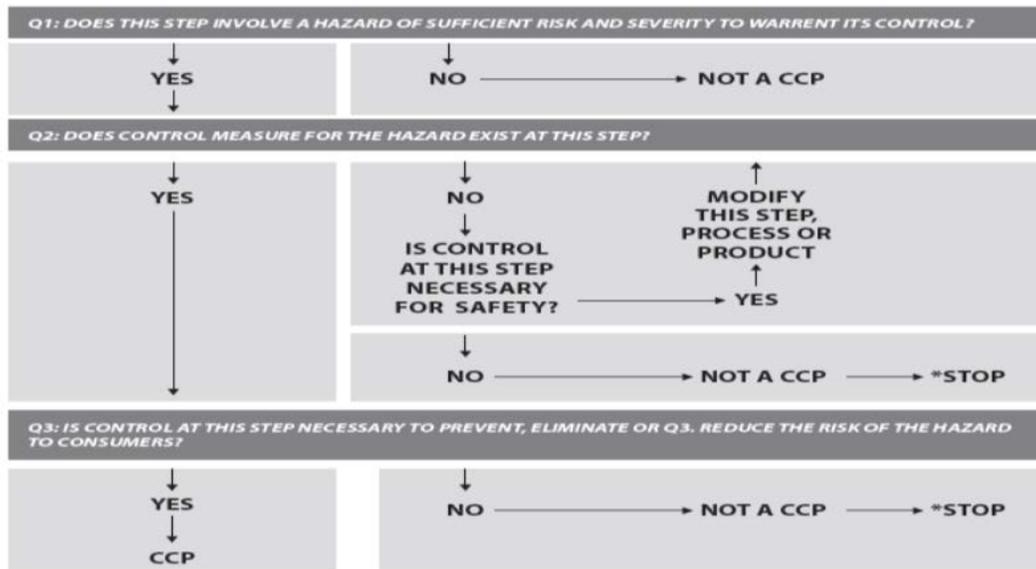
A food safety hazard is any unacceptable contamination by a biological, chemical, or physical agent at sufficient levels to cause a food to be unsafe for human consumption.

- **Biological hazards** include bacteria, bacterial toxins, viruses, and parasitic organisms that could survive, grow, or contaminate food products/raw materials, and potentially cause foodborne illness.
- **Chemical hazards** could result from a number of sources: agricultural chemicals, insecticides, fungicides, etc.; cleaning/sanitizing agents and chemicals, certain naturally-occurring toxins such as Scombrototoxin (histamine), Ciguatoxin, mycotoxins from mold, shellfish toxins, etc. and misuse of food chemicals (preservatives, additives, etc.).
- **Physical hazards** include; inadvertent field matter (stones, wood, metal fragments, etc.); inadvertent processing residues (glass, metal fragments, etc.); intentional materials (employee sabotage) and miscellaneous particulates and fragments.

## 6. Establish Control Measures in SOP's, Critical Control Points (CCP's) and Critical Limits (CL)

### CCPs

A Critical Control point (CCP) is a step in the production process of a HACCP plan where a hazard is likely to occur, and where a control can be applied to eliminate or effectively minimize the risk of occurrence. Use the CCP identification tree (see below) as a tool to determine if a step is a Critical Control Point.



(\*) Proceed to the next identified hazard in the described process.

(\*\*) Acceptable and unacceptable levels need to be defined within the overall objectives in identifying the CCPs of HACCP plan.

### CLs

A critical limit (CL) helps maintain food safety by establishing an acceptable threshold of control for a given point in the preparation process of a food product. Each critical control point (CCP) will have a critical limit (CL). For example, to kill bacteria found in raw foods, a certain temperature must be reached for a period of time. Cook bacon until it reaches a temperature of 145 F for at least 15 seconds (this is the required cook temperature for whole muscle pork and the critical limit for the cooking CCP).

**7. Establish Monitoring Process.** Monitoring activities ensure that the process is under control at each critical control point. Each monitoring procedure and its frequency must be listed in the HACCP plan.

No process is perfect, and deviations will happen. You must continuously observe hazard areas and document in writing when deviations in the process occur. This can be done by monitoring. Monitoring can help in three ways:

- Keep track of processes, and identify problems early
- Alert if a CCP is not staying within its critical limit

- Provide written records for future reference

**8. Develop Corrective Actions.** Corrective actions are the actions to be taken when the monitoring activity shows that there was deviation from an established critical limit. The HACCP plan must identify the corrective actions to be taken if a critical limit is not met so no hazardous food is served to consumers. The person most familiar with the HACCP plan should manage and correct critical limit control problems. This person will:

- Find out what is causing the problem and correct it
- Determine proper action to be taken with the affected food product
- Document action taken to correct the problem

In the HACCP plan, the corrective actions should:

- Show what happens when a deviation occurs
- Show who handles deviations and corrective actions
- Provide a written record of corrective actions taken

## **9. Ongoing Verification Plan**

Verification procedures are activities other than monitoring that ensure that your HACCP plan is effective and is functioning properly. These activities include review of the initial plan, periodic maintenance of the plan, and verification of regular documentation. This is necessary to make sure your plan and process remain safe and effective.

**10. Record Keeping** All facilities must maintain a hazard analysis and written HACCP plan, including records documenting the monitoring of critical control points, critical limits, verification activities, and the handling of processing deviations. These records must be kept on-site and available for inspection. Indicate in your plan where these records will be located.

Your documentation does not need to be complex, but it must be effective. Examples of the Records/Charts that will be used in the HACCP Plan are:

- Thermometer Calibration
- Refrigeration/Freezer Daily Temperatures
  - Continuous temperature records.
- Receiving Logs
- Final Cook/Cool Time/Temperatures
- Hot Holding Foods Times/Temperatures
- Labeling Logs
  - Records indicating compliance with specifications for packaging materials.
  - Records indicating compliance with sealing specifications.

- Records that show no products were used after the shelf-life date on temperature-sensitive products.
- Finished product
  - Sufficient data and records to establish the efficacy of barriers in maintaining product safety.
  - Sufficient data and records to establish the safe shelf-life of the product if age of product can affect safety.
  - Documentation of the adequacy of the HACCP procedures from an authority knowledgeable of the hazards involved and necessary controls.
- Deviation and corrective action
  - Records of all actions taken following deviations at a CCP.
  - Reassessment records and modifications to the HACCP plan indicating approved revisions and changes in ingredients, formulations, preparation, packaging, and distribution control, as needed.
- Employee training
  - Records indicating that employees responsible for implementation of the HACCP plan understand the hazards, controls, and procedures.