Philadelphia Department of Public Health
Office of Food Protection

HACCP Summary

HAZARD ANALYSIS AND CRITICAL CONTROL POINT (HACCP)

HACCP systems are designed to provide a management tool to protect food and prevent potential food safety problems from biological, chemical or physical foodborne hazards that can affect the safety of food. Hazard analysis serves as the basis for establishing critical control points (CCPs). CCPs identify those points in the process that must be controlled to ensure the safety of food. Appropriate parameters or critical limits are established that must be met for each CCP. Monitoring and verification steps are included in the system, again, to ensure that potential risks are controlled. The hazard analysis, critical control points, critical limits, and monitoring and verification steps are documented in a HACCP plan.

A comprehensive HACCP plan and associated records will include all of the following:

(1) Listing of the HACCP team and assigned responsibilities;
(2) Description of the product and its intended use;
(3) Flow diagram of food preparation steps or activities indicating CCPs;
(4) Hazards associated with each CCP identified and the preventive measures needed to control the CCP will be specified;
(5) Critical limits for each CCP prescribed will ensure the safety of the food without failing to meet the safety criteria of the CCP;
(6) Monitoring system(s) will be specified that will indicate the frequency of monitoring, tools or equipment, and the methods to perform the monitoring;
(7) Corrective action plans for deviations from critical limits;
(8) Record keeping procedures; and
(9) Procedures for verification of the HACCP system.

Seven principles that guide development of an effective HACCP plan are listed below.

#1: **HAZARD ANALYSIS** - identification of hazards; biological, chemical, or physical property that can cause a food to be unsafe. The **Hazard Analysis Process** involves evaluating specific issues about the food or foods being handled such as:

(1) Ingredients
(2) Intrinsic factors of food
(3) Procedures used for preparation or processing
(4) Microbial Content of the Food
(5) Facility design
(6) Equipment design
(7) Food Packaging
(8) Sanitation
(9) Employee health, hygiene, and education
(10) Conditions of storage between packaging and consumer use
(11) Intended use
(12) Intended consumer (health, age, etc.)

#2: **IDENTIFY THE CRITICAL CONTROL POINTS (CCP)** - A control point is any point, step, or procedure at which biological, physical, or chemical factors can be controlled.

Each step in the food handling or preparation process can be listed or diagramed to identify each step where control of identified hazards can be evaluated, measured and monitored to determine that safety measures or controls are properly applied.

Common CCP's for handling or preparation of potentially hazardous food may include: temperature of ready-to-eat foods at delivery; hand washing prior to handling ready-to eat food, temperature and time for foods that are cooked, cooled, or reheated.

#3: **ESTABLISH CRITICAL LIMITS FOR PREVENTIVE MEASURES** – set or establish a measurable limit or criteria that must be met for each preventive measure associated with a CCP.

Criteria Most Frequently Used for Critical Limits

Time Temperature Aw (water activity) pH Titratable acidity Humidity Viscosity
Preservatives Salt concentration Available chlorine

#4: **ESTABLISH PROCEDURES TO MONITOR CCPS** to indicate that the hazard is under control. This requires use of tools such as a thermometer to make **Observations and Measurements.** This should be done for all food/menu items handled in the establishment. Observation and measurements should be documented to provide a record that the procedures used for the handling or preparation of food meets food safety requirements. Common measurements may include:

Visual observations Temperature Time pH Aw

This step will identify loss of food safety control: what, how, when, who.

#5: **ESTABLISH CORRECTIVE ACTION TO BE TAKEN WHEN MONITORING SHOWS THAT A CRITICAL LIMIT HAD BEEN EXCEEDED.** This step is important to help all employees know what needs to be done when a food safety problem occurs. A written corrective action plan will identify the different options for handling a particular problem and how to change the process to make sure food is handled safely and that the CCP has been brought under control.

#6: **ESTABLISH EFFECTIVE RECORD KEEPING SYSTEMS THAT DOCUMENT THE HACCP SYSTEM**
Records that may be included are noted below:

Ingredients
- Supplier certification documenting compliance with establishment's specifications.
- Establishment audit records verifying supplier compliance.
- Storage temperature record for temperature sensitive ingredients.
- Storage time records of limited shelf-life ingredients.

Preparation
- Records from all monitored CCPs.
- Records verifying the continued adequacy of the food handling procedures.

Packaging
- Records indication compliance with the specification of packaging materials
- Records indication compliance with sealing specifications.

Finished Product
- Sufficient data and records to establish the efficacy of barriers in maintaining product safety.
- Sufficient data and records establishing the safe shelf-life of the product; if age of product can effect safety.
- Documentation of the adequacy of the HACCP procedures from an authority knowledgeable of the hazards involved and necessary controls.

Storage and Distribution
- Temperature records.
- Records showing no product shipped after shelf life date on temperature-sensitive products.

Deviation and Corrective action
- Validation records, records that indicate revision of the HACCP plan due to observed deviations and changes in ingredients, formulation, preparation, packaging; and distribution control; as needed.

Employee training.
- Records indicating that food employees responsible for implementation of the HACCP plan and understand the hazards, controls and the procedures.

PRINCIPLE #7: **ESTABLISH PROCEDURES TO VERIFY THAT THE HACCP SYSTEM IS WORKING**

Scientific or technical verification that the critical limits and CCPs are satisfactory.
Verification ensures that the facility's HACCP plan is functioning effectively.
Documented periodic revalidation, independent audits or other verification procedures.