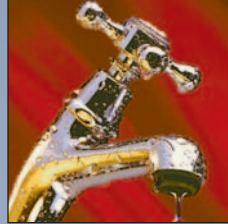




HACCP

Training Series



HACCP Manager Certification Training

Version 3.0



Center for
Public Health Education

HACCP Training Manual Table of Contents

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▲ 1.0 What is HACCP?

Hazard Analysis and Critical Control Points (HACCP) is a system of identifying hazards in the production of food and implementing control measures to prevent, eliminate, or reduce hazards to an acceptable level.

HACCP as a food safety concept was developed in the 1960s. In response to the National Aeronautics and Space Administration (NASA), Pillsbury developed HACCP as a preventative system to increase confidence that food provided to astronauts would not cause illnesses.

The concept of HACCP continues to evolve. The development, use, and evolution is primarily an industry initiative. HACCP has gained global recognition and acceptance with industry and government officials as the system of choice for food safety.

This course is based on the philosophies of two HACCP authorities, the U.S. National Advisory Committee on Microbiological Criteria for Foods (NACMCF), and the World Health Organization (WHO). Their views regarding HACCP are nearly identical.

▲ 1.1 National Advisory Committee on Microbiological Criteria for Foods

NACMCF was established in 1988 in the United States. The organization is co-sponsored by the Food Safety and Inspection Service (FSIS), the Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), the National Marine Fisheries Service (NMFS), and the Department of Defense Veterinary Service Activity. In 1985, the National Academy of Sciences released its report, *An Evaluation of the Role of Microbiological Criteria for Food*, and made recommendations that led to the formation and appointment of NACMCF. NACMCF developed the HACCP Principles for Food Production in November 1989 and has worked to standardize the principles of HACCP for all members of the food industry. The document was updated by NACMCF in 1992 as the Hazard Analysis and Critical Control Point System. In 1997, it was revised to be consistent with the 1997 revision to the WHO's CODEX HACCP.

NACMCF sponsors numerous subcommittees and task groups that do research, mainly in the area of food microbiology. It has 30 members appointed by the Secretary of the U.S. Department of Agriculture (USDA).

▲ 1.2 World Health Organization's CODEX Alimentarius Commission

The CODEX Alimentarius Commission (CODEX) develops international food safety standards. CODEX is a joint commission of the Food and Agriculture Organization (FAO) and the WHO, both departments of the United Nations. FAO could be consid-

Core Objectives:

- Understand the two categories of activities associated with HACCP.
- Know how to assess likelihood of occurrence and severity for all potential risks.
- Learn what makes a hazard “significant”.
- Identify the difference between a “Control Point” and a “Critical Control Point”
- Learn how to assign Critical Limits for all CCPs
- Understand how to monitor CCPs and their Critical Limits.
- Learn how to develop corrective action plans for the HACCP plan.
- Understand the difference between HACCP plan verification and validation.
- Know what records are required in a HACCP system.

▲ 3.0 Overview

The seven principles of HACCP can be divided into two categories: the identification of significant hazards and the control of those hazards. The seven principles are:

1. Conducting a hazard analysis.
2. Determining the critical control points (CCPs).
3. Establishing critical limits.
4. Establishing a system to monitor control of the CCPs.
5. Establishing the corrective action when monitoring indicates that a CCP is not under control.
6. Establishing procedures for verification to confirm that the HACCP system is working effectively.
7. Establishing documentation concerning all procedures and records appropriate to these principles and their applications.

▲ 3.1 HACCP Principle One: Conducting a Hazard Analysis

Conducting a hazard analysis is the process of identifying significant risks relative to a food product or manufacturing process. It takes into consideration the hazards associated with the intended end use of the product. A complete and thorough hazard analysis is critical to the success of the HACCP plan because it serves as the basis for the rest of the HACCP activities.

The HACCP team documents all hazards that may be *reasonably expected to occur* at each step in the process. A hazard is anything that may cause injury or illness if not controlled, reduced or prevented. It may be a biological, chemical, or physical property that causes food to be unsafe for consumption. The team must understand the hazards typically associated with the food ingredients and the process steps to be covered by the HACCP plan. An outside consultant might be helpful at this point. Once all potential hazards are documented, the team identifies which hazards must be prevented, eliminated, or reduced to acceptable levels to ensure the production of safe foods. These hazards are deemed *significant* and must be addressed by the plan.

The definition of a hazard depends on the targeted consumer. For sensitive market consumers, a hazard that causes minor distress may have to be included in the HACCP plan.

The significance of a hazard is best determined through a systematic assessment. The Hazard Analysis Worksheet (Appendix 5) provides such a tool. This worksheet allows the user to document potential hazards, their adverse effects, and their control meas-

**HACCP Plan Development
Hazard Analysis Worksheet**

HACCP Plan:

Date Plan Updated:

Product Description:					
Process Step	Identify potential hazards (including harmful effects) introduced, controlled or enhanced at this step.	Are any of the potential food-safety hazards significant?	Justify the decision.	What control measure(s) can be applied to prevent significant hazards?	Is this step a Critical Control Point? (Verify with Decision Tree)