

HACCP Information

HACCP

Hazard Analysis Critical Control Point (HACCP) is a science-based, systematic, and preventative approach to ensure the safety of food. It is a tool to identify and assess hazards, establish controls and monitor these controls. The system focuses on prevention rather than relying on end-product testing. It is internationally recognized and is being used by the food industry around the world.

History

HACCP originated in the 1960's when the Pillsbury Company developed it for National Aeronautics and Space Administration (NASA) space program to produce the safest food possible for space travel.

Benefits

A company may also benefit if they implement an effective HACCP system. Some benefits are:

- Enhance food safety
- Increase market access
- Improve operational activities
- Reduce costly recall and wastage
- Increase consumer confidence

Hazards

There are three classes of food safety hazards that are controlled with a HACCP system:

- Biological (e.g. bacteria, parasites)
- Chemical (e.g. cleaners, pesticides)
- Physical (e.g. glass, jewelry)

Prerequisite Programs

Prerequisite programs, also known as Good Manufacturing Practices (GMPs), should be in place

before an effective HACCP system can be implemented. Prerequisite Programs are steps or procedures that control the operational conditions in a food establishment creating environmental conditions that are favorable for the production of safe food. Some examples of prerequisite programs are pest control, sanitation, and employee hygiene.

Preliminary Steps

There are five preliminary steps that need to be completed before the seven principles of HACCP can be carried out.

1. Assemble HACCP Team

The development of a HACCP plan should be a team approach. The team should consist of individuals with different specialties and who are knowledgeable about HACCP, and may require outside expertise.

2. Describe the product

A full description of product should be completed, including relevant safety information (e.g. composition, packaging, storage conditions).

3. Identify intended use

The intended use of the product should be based on the expected uses of the product by the end user.

4. Construct flow diagram

A flow diagram should be constructed and be plant specific to cover all steps in the operation for a specific product.

5. *On-site confirmation of flow diagram*

The flow diagram must be confirmed by an individual(s) with sufficient knowledge of the operation by comparing the flow diagram to the processing operation during all stages and hours of operation. The flow diagram should be amended when appropriate.

Seven Principles of HACCP

HACCP plans are developed using seven principles that has been standardized by the Codex Alimentarius Commission:

Principle 1: Conduct a Hazard Analysis

Conduct a hazard analysis to identify all potential hazards which may occur at each step of the process from start to finish. Assess their risk and severity to determine if the hazard is significant and consider any measures to control the identified hazards.

Principle 2: Determine Critical Control Points

A Critical Control Point (CCP) is a point, step or procedure at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level. Determining the CCPs involves identifying where in the process operations the identified hazards can be prevented, reduced or eliminated.

Principle 3: Establish Critical Limits

Critical Limits are criterion which separates acceptable from unacceptable. Critical Limits must be specified and validated for each CCP and must be measurable.

Principle 4: Establish Monitoring Procedures

Monitoring is the scheduled measurement or observation of a CCP relative to its critical limits to determine if a CCP is under control. Monitoring procedures must be implemented and documented for each CCP.

Principle 5: Establish Corrective Actions

A corrective action is a predetermined action to be taken when the results of monitoring at the CCP indicates a loss of control. They must be developed for each CCP to deal with deviations when they occur.

Principle 6: Establish Verification Procedures

Verification is the application of methods, procedures, tests and other evaluations, in addition to monitoring to determine compliance with the HACCP Plan. It determines if the HACCP plan is working correctly.

Principle 7: Establish Documentation and Record Keeping

HACCP procedures should be documented (ex: hazard analysis). Monitoring and verification records (ex: corrective actions) must be complete and accurate.

Training

Training of personnel in HACCP principles and applications is essential for the effective implementation of a HACCP System.

Conclusion

A HACCP system should be reviewed on a scheduled, continuous basis and appropriate amendments made when necessary. It is the responsibility of the food processors to ensure the food produced at their establishment is safe for human consumption. Management awareness and commitment to food safety is necessary for the implementation of an effective HACCP system.

References/Resources:

Canadian Food Inspection Agency
Codex Alimentarius Commission

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