



HAZARD ANALYSIS & CRITICAL CONTROL POINTS

HACCP Basics

A HACCP program looks at potential hazards associated to a specific product and process, it identifies what could go wrong at each step of the operation in the absence of controls. It focuses in seafood hazards that can result in illness or injury of the consumer.



Following are 10 tasks -3 preliminary steps and 7 actions base on the principles of HACCP, which form the basis of a HACCP program.

TASK 1 Establish a HACCP team.

This team should be made up of people of different specialties, and may include personnel from maintenance, production, sanitation and quality control. If you do not have these resources within your business, seek help from consulting groups, Sea Grant, LSU AgCenter, trade associations, and Louisiana Department of Health. Your team will be responsible to develop AND implement the HACCP plan.

TASK 2 Describe the product.

Though it may seem unnecessary, putting your product specifications down on paper may help you to spot a potential hazard you never considered. Make sure you identify:

- Type of seafood product to include species and product form
- Where product is purchased (fishermen, farmer, or other processor)
- How product is received, stored and shipped
- Intended consumer and intended end use; e.g. raw, raw ready-to-eat, cooked

TASK 3 Draw up the process flow chart.

Also known as a flow diagram, this chart will track all process steps from receiving to shipping. Include every handling,

processing and holding step for the primary product as well as ingredients and packaging. Confirm the accuracy of your chart by 'walking the line' in your plant to make sure every procedure is included.

It is a good practice to have a written description of what happens during every stage; for example, what type of refrigeration is used to store your oysters, at what temperature and for how long.

TASK 4 Hazard Analysis.

PRINCIPLE 1. All potential hazards that may occur for each ingredient and at each stage of seafood processing should be considered:

- **Species-Related:** pathogens from harvesting area, parasites, natural toxins, scombrototoxin, etc.
- **Process-Related:** pathogen bacteria growth, pathogen survival through cooking, undeclared allergens, etc.

Once a food safety hazard has been identified, then an appropriate control measure or action must be identified.

TASK 5 Determine the critical control points (CCP).

PRINCIPLE 2. A CCP is a step where a hazard can be prevented, eliminated or reduced to an acceptable level. At each step in your process flow chart, the team must determine whether the hazard can occur,

and if so whether control measures exist. If the hazard can be controlled adequately, is not best controlled at another step, and is essential for food safety, then this step is a CCP for the specified hazard. For example refrigerated storage is a point in the process that can control the hazard of bacterial growth.

TASK 6 Establish critical limits for each CCP.

PRINCIPLE 3. A critical limit is a maximum and/or minimum value that must be met to control a hazard; often measurements of temperature, time, moisture level, pH, water activity, and direct observation such as presence of ice. For example to eliminate pathogens from cooked crabs, the CCP is cooking, and the limits will be a minimum internal product temperature and the cooking time.

TASK 7 Establish a monitoring procedure.

PRINCIPLE 4. Monitoring is a planned series of observations or measurements to determine whether critical limits for each CCP are being met. It is crucial that monitoring is done based on a set schedule, and that results are readily available, so that corrective action can be taken immediately if needed.

TASK 8 Establish corrective action. **PRINCIPLE 5.** If monitoring indicates that critical limits are

not being met, thus demonstrating that the product may be unsafe, corrective action must be taken immediately. The objectives of the corrective action are to keep potentially unsafe product from reaching the consumer and to restore control of the process prior to producing more product.

TASK 9 Verification.

PRINCIPLE 6. The complete plan must be verified to show that the product is safe and meets customer specifications.

Ways in which the system can be verified include:

- Collecting samples for analysis by a method different from the monitoring procedure
- Calibration or accuracy check of measuring devices
- Observing operations at CCPs
- Weekly review of all records
- Formal independent audit

TASK 10 Record-keeping.

PRINCIPLE 7. Record keeping demonstrates that the correct procedures have been followed, offering product traceability. Documents should include HACCP plan, monitoring of CCP, verification, and corrective actions records. This may also include any validation or scientific support documentation.

