



# QM 020 Hazard Analysis and Critical Control Points

## Introduction

The company is committed to supplying safe products for consumption. As part of this commitment, all products and processes used in the manufacture of food products are subject to hazard analysis based on the Codex Alimentarius HACCP principles and the requirements of ISO 22000:2005.

The Food Safety Quality Manual demonstrates due diligence of the company in the effective planning, development and implementation of the food safety management system. These documents are fully supported by the completion of a HACCP plan and the records specified in this manual for the monitoring of planned activities, maintenance and verification of control measures and by taking effective actions when non-conformity is encountered. All food safety hazards, that may reasonably be expected to occur, are identified by this process and are then fully evaluated and controlled so that our products do not represent a direct or indirect risk to the consumer.

The Food Safety Management System is fully supported by established verification procedures and validation of the control measures/combination of control measures that are implemented through the operational pre-requisite programmes or the HACCP plan.

## Management Commitment

We are a leading food company committed to produce safe and legal products in line with legislation and to continuously improve our standards of hygiene, quality and safety in relation to both our product range and the environment in which we manufacture these products.

## HACCP principles

HACCP is a system, which identifies specific hazards and implements measures for their control. All the HACCP's contained in this manual have been developed taking legislation requirements into consideration and using the seven basic principles detailed below: -

### Principle 1

Prepare a flow diagram of the steps in the process. Conduct a hazard analysis by identifying potential hazards. Assess likelihood of occurrence of these hazards and identify control options

### Principle 2

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Identify the Critical Control Points in the process using the decision tree

## Principle 3

Establish critical limits, which must be met to ensure each Critical Control Point is under control

## Principle 4

Establish a monitoring system to ensure control of the Critical Control Point by scheduled testing or observations

## Principle 5

Establish the corrective action to be taken when monitoring indicates that a particular Critical Control Point is moving out of control

## Principle 6

Establish documentation concerning all procedures and records appropriate to these principles and their application

## Principle 7

Verify that HACCP is working effectively

## HACCP Team

A core multidisciplinary team is utilised within the company to conduct develop the Food Safety Management System. This core team is supplemented by other staff when specific areas or products are being analysed. The team have knowledge and experience of HACCP, Products, the Process, the Equipment, Hazards and in developing and implementing a food safety management system. The HACCP team leader is able to demonstrate competence in the understanding of HACCP principles and their application. Key personnel identified as HACCP team members are HACCP trained and have appropriate experience, all of which is documented on the HACCP teams training records. Expert external assistance may be used as an aid.

## Team Member

Technical Manager  
Laboratory Manager  
Processing Manager  
Engineering Manager

## HACCP Training

Advanced  
Intermediate  
Intermediate  
Intermediate

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likely to occur for each product and process category in each process facility as identified by the information gathered in the steps so far:

- HACCP Scope
- Raw Materials
- Product Description
- Intended Use
- Terms of Reference
- HACCP Flow charts
- Description of Process Steps
- Control Measures

In addition Food Safety Hazards are identified and recorded based on:

- Experience (Food Safety Team knowledge)
- External Information such as epidemiological studies and other historical information relating to the product food safety
- Information from the Food Chain on Food Safety Hazards of relevance for intermediate products, end products and the product end of the food chain
- Customer complaints
- Previous internal non conformances are used to help assess the risk.

The food safety team will also use the hazard analysis prompt to identify potential food safety hazards

Food Safety Hazard Analysis Prompt	
1	Are the raw materials, ingredients or food contact packaging likely to have microbiological hazards present? (Refer to Biological Hazards worksheet)
2	Are the raw materials, ingredients or food contact packaging likely to have chemical hazards present? (Refer to Chemical Hazards worksheet)
3	Are the raw materials, ingredients or food contact packaging likely to have physical hazards present? (Refer to Physical Hazards worksheet)
4	Are there any characteristics in the composition of the food during which can prevent a hazard? E.g. Preservatives, pH, Water Activity
5	Does the food permit survival or multiplication of pathogens and at

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Step Number	Step Name	Hazards Identified	Probability	Severity	Significance
1	Delivery of Ingredient A	Bone	1	3	3
1	Delivery of Ingredient A	Campylobacter spp.	2	3	6
1	Delivery of Ingredient A	Contamination with Bacteria from pests	3	3	9
1	Delivery of Ingredient A	Pesticides	3	1	3
1	Delivery of Ingredient A	Salmonella spp. (S. typhimurium, S. enteritidis)	3	3	9
1	Delivery of Ingredient A	Bacteria (spore-forming) General	2	2	4
1	Delivery of Ingredient A	Pest control chemicals	1	1	1

Firstly the Food Safety Team assess the likelihood of the hazard occurring and enter:

- 1 for Highly Unlikely
- 2 for Possible
- 3 for Likely

Then the Food Safety Team assesses the severity of the hazard and enters:

- 1 for Not Severe
- 2 for Could possibly cause illness
- 3 for Severe (Could be fatal)

The Food Safety team factor in the vulnerability of the targeted consumer, the survival and multiplication of any biological hazards and any likely toxin production, the presence of chemicals or foreign bodies, contamination at any stage in the process and possible deliberate contamination or adulteration to the severity score to determine all the Significant Food Safety Hazards which score a 9 as highlighted in red on the HACCP calculator.

All of the food safety hazards that score a 9 on the HACCP calculator are regarded as significant and form the Significant Food Safety Hazard List.

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The validation provides documented proof that the established limits at critical control points achieve the intended control for the designated food safety hazards. End products are analysed by the Laboratory for the Food Safety and the results are checked by the Food Safety Team ensure that the control measures (or combination of control measures) are effective controlling the food safety hazard to the defined acceptable level. When validation results fail to confirm the above then the control measures are re-evaluated and appropriately modified by the Food Safety Team. These modifications may include changes to:

- Control measures
- Raw materials (Food Contact Packaging or Ingredients)
- Processing methods
- Manufacturing methods
- End product
- Distribution methods
- Intended use of the product

### Responsibility

The HACCP Team is responsible for:

- Following this procedure and constructing the HACCP Plans
- Validation and verification of the HACCP system
- Review of the effects of any factory process or product change on the Food Safety Management System
- Food Safety Management System updating

### References

HACCP Decision Tree

"Hazard Analysis and Critical Control Point (HACCP) system and Guidelines for its Application" (Codex Alimentarius Commission, Geneva, June 1997).

HACCP Manual

*\* Enter relevant Legislation for your organisation e.g. Food Safety Act ISO 22000:2005*

Revision Number	Summary of Changes made from previous revision	Requested By:	Authorised By:
2	Update to meet the requirements of ISO 9001:2008	Quality Manager	Site Director

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