



## **Level 3 Award in HACCP for Food Manufacturing**

**July 2009**

**This qualification has a credit value of 3**

QCA Qualification Number 500/6522/1

### **Description**

Hazard Analysis and Critical Control Point (HACCP) is a well established system of food safety management. This Level 3 qualification covers the importance of HACCP-based food safety management procedures, the preliminary processes for HACCP-based procedures, development of the procedures, monitoring of critical control points and corrective actions and the evaluation of the procedures. The qualification is firmly based on the National Occupational Standards developed by Improve, the Sector Skills Council for the food and drink manufacturing industry, and conforms to the qualification template developed by RSPH, other awarding bodies and Improve.

The aim of this qualification is to develop an understanding of HACCP-based food safety management. Holders of this qualification will have the appropriate knowledge and understanding to be an integral part of a HACCP team and to supervise the implementation of a HACCP-based system in the work environment. Although designed primarily for employees of the food manufacturing industry, this qualification will also be of benefit to caterers and retailers.

## Summary of Outcomes:

To achieve this qualification, a candidate must:

1. **State the importance of HACCP based food safety management systems, by being able to:**
  - Outline the need for HACCP
  - Describe the HACCP approach to food safety procedures
  - Review legislation relating to HACCP.
  
2. **Explain the preliminary processes for HACCP based procedures by being able to:**
  - State the requirements for a HACCP team
  - Outline the prerequisites for HACCP
  - Describe food production processes including use of end product
  - Evaluate process flow diagrams.
  
3. **Outline the development of the HACCP based procedures, by being able to:**
  - Identify hazards and risks in the production process
  - Determine critical control points
  - Establish critical limits
  
4. **Describe procedures for ensuring food safety, by being able to:**
  - Establish and implement monitoring procedures at critical control points
  - Describe corrective actions.
  
5. **Evaluate HACCP based procedures, by being able to:**
  - Describe documentation and record keeping procedures
  - Outline the verification and review of procedures.

## Content:

### 1. Importance of HACCP Based Food Safety Management Systems

*Need for HACCP based food safety management systems:* definitions of food safety, food safety management and food safety management procedures; effect and consequences of poor food hygiene and safety; current food poisoning trends and statistics; growth in size and diversity of food industry; consumers' perception of safe and acceptable food; effect on consumer confidence; use in due diligence defence.

*The HACCP approach to food safety management:* HACCP described as a proactive, preventative food safety management system; overview of HACCP; the seven HACCP principles; HACCP terminology; definition of HACCP terms as stated in *Codex Alimentarius*; definition of target levels; application of HACCP to specific operations; importance of pre-requisite programmes, education and training; advantages and benefits of HACCP systems.

*Legislation relating to HACCP:* relationship of European legislation to UK food safety legislation; legal status of Acts of Parliament, Regulations and Directives; importance and main provisions of EC Directive 852/2004 *'Hygiene of foodstuff'*; The Food Hygiene (England) Regulations 2006, The Food Hygiene (Scotland) Regulations 2006, The Food Hygiene (Wales) Regulations 2006, The Food Hygiene Regulations (N. Ireland) 2006 or any superseding legislation; enforcement of legislation and consequences of non-compliance; relevance of Codes of Practice and Industry Guides produced by Government departments and the food trade.

### 2. Preliminary processes for developing a HACCP system

*Requirements for a HACCP team:* composition of the HACCP team; appropriate knowledge, competence and expertise; identification and utilisation of appropriately experienced staff from within the workforce; roles, responsibilities and levels of authority of members of the HACCP team; use of *ad hoc* members, external experts and consultants; training and development of the HACCP team.

*Prerequisites for HACCP:* need for food businesses to have effective policies and procedures in place prior to the development of a HACCP-based food safety management system; prerequisites to include management commitment, resources and facilities, approval systems for suppliers, staff training, staff hygiene procedures, effective cleaning and disinfection procedures, pest management, waste management and labelling, traceability and recall procedures.

*Food production processes and use of the product:* description of the product and procedures for manufacture; consideration of raw materials; transport and receipt of raw materials; importance of approved suppliers and food chain information; processing/treatment processes; storage of ingredients,

intermediate and final products; packaging; distribution; intended use of the product; identification of at-risk groups; likelihood of bacterial contamination and/or growth; presence of preservatives.

*Process flow diagrams:* purpose and use of flow diagrams; scope; preceding and subsequent steps to the specified operation; verification of the flow diagram.

### 3. **Development of HACCP based procedures**

*Hazards and risks:* biological, chemical (including allergenic) and physical hazards; examples of each type of hazard; hazards associated with particular processes; hazards associated with purchase of raw materials, delivery of raw materials, storage, handling, preparation, processing, cooling, post-processing treatments, packaging of finished product, transport of finished product; risk and severity of hazards; availability of support, information and advice for hazard identification; validation of information and advice obtained.

*Critical control points:* control measures; possible controls for hazards associated with purchase of raw materials, delivery of raw materials, storage, handling, preparation, processing, cooling, post-processing treatments, packaging of finished product, transport of finished product; critical control points; identification of critical control points; use of decision trees; availability of support, information and advice for identification of critical control points; validation of information and advice obtained.

*Critical limits:* parameters used in the measurement of critical limits such as temperature, time, pH, water activity, concentration; target levels and their benefits; relationship of critical limits to food safety; sources of information for critical limits; danger to consumer if critical limits exceeded; examples of critical limits for a range of processes and critical control points; availability of support, information and advice for establishing critical limits; validation of information and advice obtained.

### 4. **Procedures for ensuring food safety**

*Monitoring procedures at critical control points:* purpose of monitoring; continuous and batch monitoring; frequency of monitoring; calibration and testing of monitoring equipment; responsible personnel; different monitoring procedures and activities for the different parameters used in the measurement of critical limits; importance of accurately recording parameter values when monitoring critical control points; monitoring of personnel; verification of monitoring procedures.

*Corrective actions:* need for corrective action if critical limits exceeded or not reached, or if monitoring indicates a likelihood of critical limits being exceeded or not reached; types of corrective action; verification of corrective actions; responsibility for implementing corrective action; importance of restoring control; need for action plans for restoring control; importance of monitoring

after control restored; treatment of improperly processed product; importance of record keeping and reporting procedures for the use of corrective actions at critical control points.

## **5. Evaluation of HACCP-based procedures**

*Documentation and record keeping:* importance of documentation and record keeping; examples of HACCP records and documentation; storage of completed records.

*Verification procedures:* importance of verification of HACCP systems; validation of the HACCP plan; information required for validation; need for independent experts; steps in the HACCP system requiring verification; methods and frequency of verification; role of audits and inspections; end-product testing; verification reports; need for review of HACCP systems.

## Assessment and Grading

Attainment of the Learning Outcomes will be assessed by a synoptic examination of ninety minutes duration set by RSPH. The examination will consist of forty five multiple choice questions.

The qualification is graded as either *Pass* or *Distinction*. Candidates who fail to reach the minimum standard for the *Pass* grade will be recorded as having failed the assessment and will not receive a certificate.

In order to be awarded a *Distinction*, candidates must be able to recall relevant knowledge and facts from the entire specification with few significant omissions and demonstrate a high level of understanding of the principles and concepts used in food safety management. Candidates who attain a mark of 38/45 or greater will be deemed to have achieved the criteria for a *Distinction*.

In order to be awarded a *Pass*, candidates must be able to recall relevant knowledge and facts from some parts of the specification and demonstrate a satisfactory level of understanding of the principles and concepts used in food safety management such that the candidate will be able to satisfactorily work in the catering or related industries. Candidates who attain a mark of 30/45 or greater will be deemed to have achieved the criteria for a *Pass*.

The examinations are provided by RSPH.

### Recommended Reading:

*Codex Alimentarius*. Codex Alimentarius Commission [www.codexalimentarius.net](http://www.codexalimentarius.net)  
Gaze, R. 2009. HACCP: A Practical Guide (4<sup>th</sup> Edition). Campden BRI  
Sprenger, R.A. 2008. Supervising Food Safety (12<sup>th</sup> Edition). Highfield .Co.UK  
Taylor, E & Taylor, J. 2008. HACCP: 12 Steps to Success (3<sup>rd</sup> Edition). Taylor  
Shannon International  
Wallace, C.A. 2005. Intermediate HACCP. Highfield .Co.UK

### Recommended prior learning:

The possession of a Foundation qualification in HACCP, such as the RSPH *Foundation Certificate in HACCP* would be advantageous but is not essential. It is recommended that candidates have knowledge of food hygiene and safety equivalent to that contained in the RSPH *Level 3 Awards in Food Safety*.

## Key Skills:

It is expected that the delivery of this qualification should provide opportunities for the development of the following *key skills*:

Application of Number Levels 2 and 3

Communication Levels 2 and 3

Improving own Learning and Performance Levels 2 and 3

Information and Communication Technology (ICT) Levels 2 and 3

Problem Solving Levels 2 and 3

Working with Others Levels 2 and 3

Guidelines for key skills are shown in Appendix 1.

## Other Issues:

The delivery of this qualification could provide opportunities for contributing to an understanding of Spiritual, Moral, Ethical, Social and Cultural issues and an awareness of Environmental issues, Health and Safety considerations and European developments. Possible areas for discussion are shown below.

<b>Spiritual</b>	The qualification can contribute to an understanding of spiritual issues by allowing students to discuss how the approaches of different religions to food production and preparation were driven by considerations of food safety.
<b>Moral and Ethical</b>	Moral and ethical issues can be developed in a discussion of the legal responsibilities of employees and employers, such as high standards of hygiene, provision of safe food and employee training.
<b>Social and Cultural</b>	A discussion of possible reasons for changes in food poisoning trends, which underlie food safety; consumption of raw foods such as fish and shellfish; different manufacturing systems and the growth of food outlets such as sandwich bars and takeaways, can contribute to an understanding of social and cultural issues.
<b>Health and Safety</b>	Health and Safety considerations are explicit in the qualification. For example, the importance of hygiene in the prevention of food poisoning, corrective actions, HACCP and risk assessment.

**Environment** Awareness of environmental issues can be raised through consideration of disposal arrangements for waste refuse and waste food, pest control methods and the use of cleaning agents.

**European** The influence of European legislation on UK law is explicit in the specification of the qualification.

### **National Occupational Standards**

The qualification has been mapped to the following National Occupational Standards of Improve.

Unit FS.109K Understand food safety management procedures in manufacture

Unit FS.115K Understand management of food safety in manufacture

Unit FS.121K Understand analysis and control of food safety hazards and risks in manufacture

Unit FS.125K Understand food safety policy and practice in manufacture

Further details of these National Occupational Standards can be obtained from RSPH Qualifications.

### **Restrictions on Candidate Entry:**

Candidates should not enter, with another awarding body, for a Level Three qualification in HACCP.

### **Special Needs:**

Centres that have candidates with special needs should consult *The Society's Regulations and Guidance for Candidates with Special Assessment Needs*; this is available from The Society and The Society's web site ([www.rsph.org](http://www.rsph.org)).

### **Recommended Qualifications and Experience of Tutors:**

RSPH would expect that tutors have teaching experience and a qualification in a relevant subject area, but recognises that experienced teachers can often compensate for a lack of initial subject knowledge, or experienced practitioners for a lack of teaching experience. It is, however, recommended that tutors have experience of implementing and maintaining HACCP systems and / or the audit of HACCP systems.



Suitable qualifications for the Level 3 Award in HACCP in Food Manufacturing include:

a) Degree or Dip. HE in:

Food Science  
Environmental Health  
Environmental Science  
Microbiology

or one that contains elements of these subjects.

b) HNC/D in one of the above.

c) Graduate Diploma in Food Science and Technology of The Institute of Food Science and Technology.

Centres should be registered with RSPH

Any enquiries about this qualification should be made to:

The Qualifications Department,  
Royal Society for Public Health,  
3<sup>rd</sup> Floor, Market Towers,  
1, Nine Elms Lane,  
London  
SW8 5NQ

Tel. 020 3177 1600 Fax. 020 3177 1601

E.mail [info@rsph.org.uk](mailto:info@rsph.org.uk)

## Appendix One: Key Skills Guidelines

This qualification provides a number of opportunities for candidates to develop competence in key skills and to produce evidence towards attainment of key skills. Successful completion of the qualification does not in itself imply attainment of the listed key skills; this is dependent on the candidate producing a portfolio of evidence and the teaching and learning methods adopted by the tutor(s) and candidate in the delivery of the qualification.

The specification content, which provides the most appropriate opportunity for key skill development, is signposted below.

### Application of Number

<b>Skill</b>	<b>Specification Content</b>
<b>N2.1</b> Interpret information from a suitable source.	Graphical and tabular information can be used to obtain information relating to current trends and statistics relating to food-borne illness (Learning Outcome 1). Graphs can also be used to determine the time required for liquids (such as soups) to cool after processing (Learning Outcome 3).
<b>N3.1</b> Plan an activity and get relevant information from relevant sources.	As for N2.1 above. Candidates can interpret temperature charts to determine what corrective action to take in the event of a failure of temperature controls (Learning Outcomes 3 and 4)

Communication

**Skill**

**Specification Content**

**C2.1a** Take part in a group discussion.

Any part of the content could be used as the basis for a discussion.

**C2.2** Read and summarise information from at least **two** documents about the same subject. Each document must be a minimum of 500 words long.

Any part of the content could be researched from textbooks and specialist journals

**C3.1a** Take part in a group discussion.

Any part of the content could be used as the basis for a discussion.

**C3.2** Read and synthesise information from at least **two** documents about the same subject. Each document must be a minimum of 1,000 words long.

Any part of the content could be researched from textbooks and specialist journals

Improving own Learning and Performance

<b>Skill</b>	<b>Specification Content</b>
<b>LP2.1</b> Help set targets with an appropriate person and plan how these will be met.	The manner in which candidates plan and carry out their programme of learning for this qualification, in consultation with their tutors/trainers, could provide evidence for this key skill or some elements of this key skill.
<b>LP2.2</b> Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance.	
<b>LP2.3</b> Review progress with an appropriate person and provide evidence of your achievements.	
<b>LP3.1</b> Set targets using information from appropriate people and plan how these will be met.	
<b>LP3.2</b> Take responsibility for your learning, using your plan to help meet targets and improve your performance.	
<b>LP3.3</b> Review progress and establish evidence of your achievements.	

Information and Communications Technology

<b>Skill</b>	<b>Specification Content</b>
<b>ICT2.1</b> Search for and select information to meet your needs. Use different information sources for each task and multiple search criteria in at least one case.	Information about any part of the content could be obtained from web-sites dealing with food safety management and HACCP. Books and articles can be accessed by on-line searches.
<b>ICT3.1</b> Search for information, using different sources, and multiple search criteria in at least one case.	

Problem Solving

**Skill**

**Specification Content**

- PS2.1** Identify a problem, with help from an appropriate person, and identify different ways of tackling it.
- PS2.2** Plan and try out at least one way of solving the problem.
- PS3.1** Explore a problem and identify different ways of tackling it.
- PS3.2** Plan and implement at least one way of solving the problem.

A number of areas within the specification can be delivered by using a problem-based approach to teaching and learning.

For example:

*Critical control points:* control measures; possible controls for hazards ..... identification of critical control points; use of decision trees.

*Corrective actions:* need for corrective action if critical limits exceeded or not reached, or if monitoring indicates a likelihood of critical limits being exceeded or not reached

Working with Others

**Skill**

**Specification Content**

- WO2.1** Plan work with others.
- WO2.2** Work co-operatively towards achieving the identified objectives.
- WO2.3** Review your contributions and agree ways to improve work with others.
- WO3.1** Plan work with others.
- WO3.2** Seek to develop co-operation and check progress towards your agreed objectives.
- WO3.3** Review work with others and agree ways of improving collaborative work in the future.

The manner in which candidates work with others in carrying out their programme of learning for this qualification, in consultation with their tutors and trainers, could provide evidence for this key skill or some elements of this key skill.