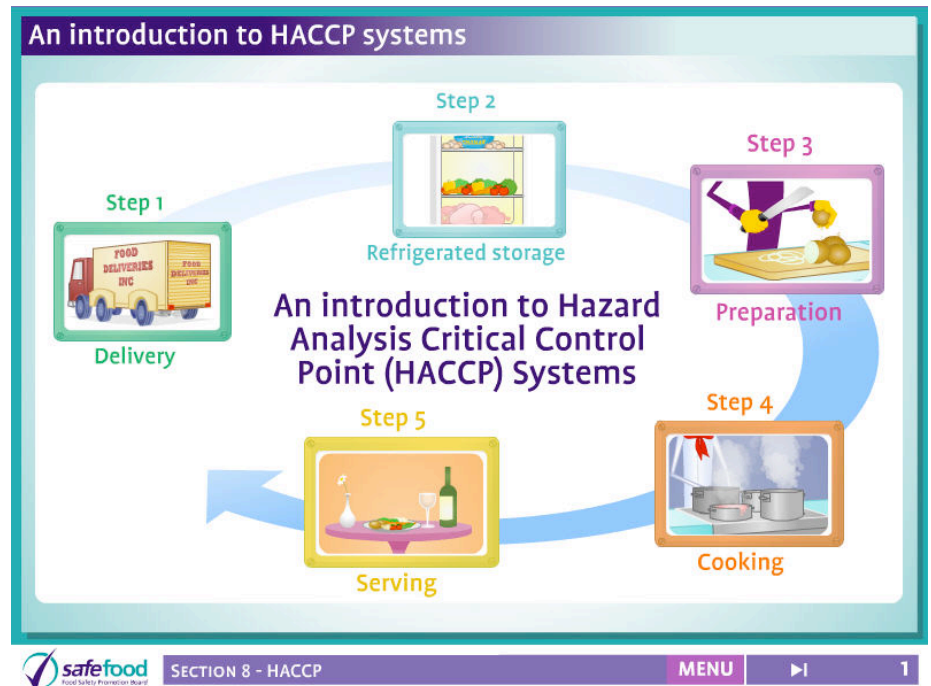


Screen 1



HACCP

Screen description

This screen shows the various stages in food storage and preparation within which HACCP may be applied.

HACCP is a system of food safety management. It involves identifying and analysing any potential hazards that may occur at any stage, from the food production stage to processing, delivery, storage, preparation, serving, and so on.

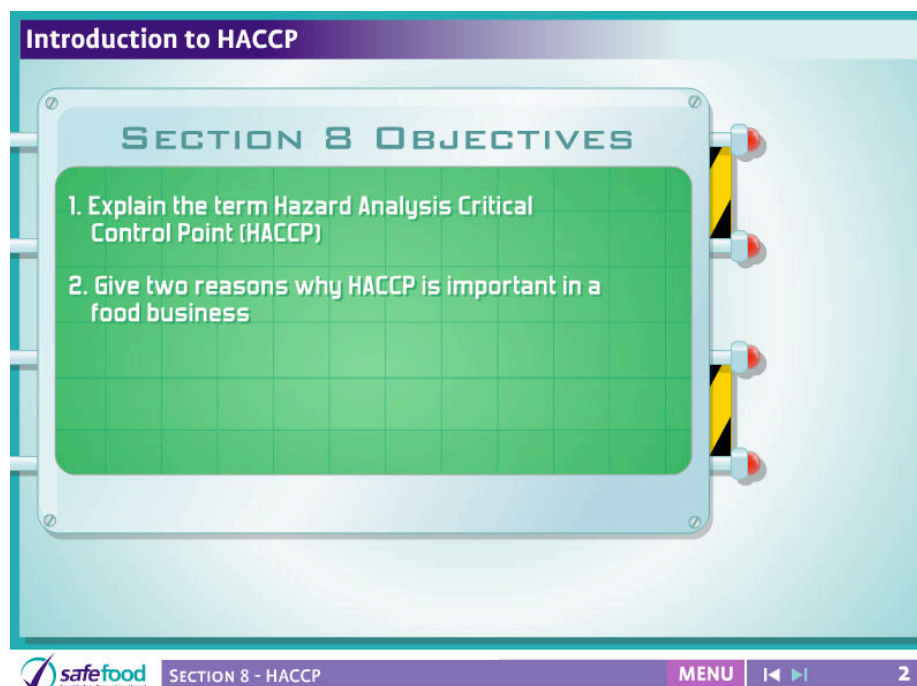
All hazards, be they microbiological, chemical or physical must be identified and analysed.

Since 1998 it has been a legal requirement that catering establishments should have a HACCP food safety management system in place.

Teacher

Explain to the students that we'll be looking at the hazards and controls in each area.

Screen 2



Objectives

Screen description

This screen lists the objectives of the chapter

1. Explain the term Hazard Analysis and Critical Control Points (HACCP)
2. Give two reasons why HACCP is important in a food business

Teacher

Ask: What can you do as a food worker to ensure that a chicken is safe for consumption?

Answers elicited may include:

1. Proper storage
2. Proper temperature control (both hot and cold)
3. Thorough cooking
4. Good operational hygiene

5. Good personal hygiene

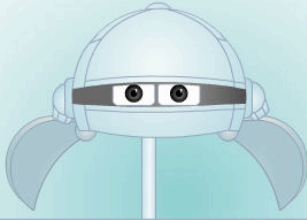
6. Safe food handling

Background Information

The Pillsbury Company developed HACCP in 1959. At the time they were planning the food for the American space programme. They had to ensure that the food that was taken on the space mission was free of any potential hazards, i.e. pathogenic bacteria or toxins.

Screen 3

What is HACCP?



HACCP

Hazard Analysis Critical Control Point (HACCP) is a system used by food businesses to:


1. Identify any step in the activities of their food business which is critical to ensuring food safety
2. Implement safety measures to reduce risks to health

Hazard : Anything that could cause harm to consumers

Risk : The likelihood of harm

HACCP involves identifying and analysing any potential hazards that may occur at any stage, from the food production stage to processing, delivery, storage, preparation, serving, etc.

All hazards, whether microbial, chemical or physical must be identified and analysed.

 **SECTION 8 - HACCP** **MENU** **3**

Definition of HACCP

Screen description

This screen gives a definition of HACCP.

Teacher

Ask the students to explain HACCP in their own words. If they are not able to, they do not understand it and it must be explained again until they do.

What is HACCP

What is Hazard Analysis and Critical Control Point (HACCP)?

Hazard Analysis and Critical Control Point (HACCP) is a system used by food businesses to:

1. Identify any step in the activities of their food business which is critical to ensuring food safety
2. Implement safety measures to reduce risks to health

Definition:

Hazard

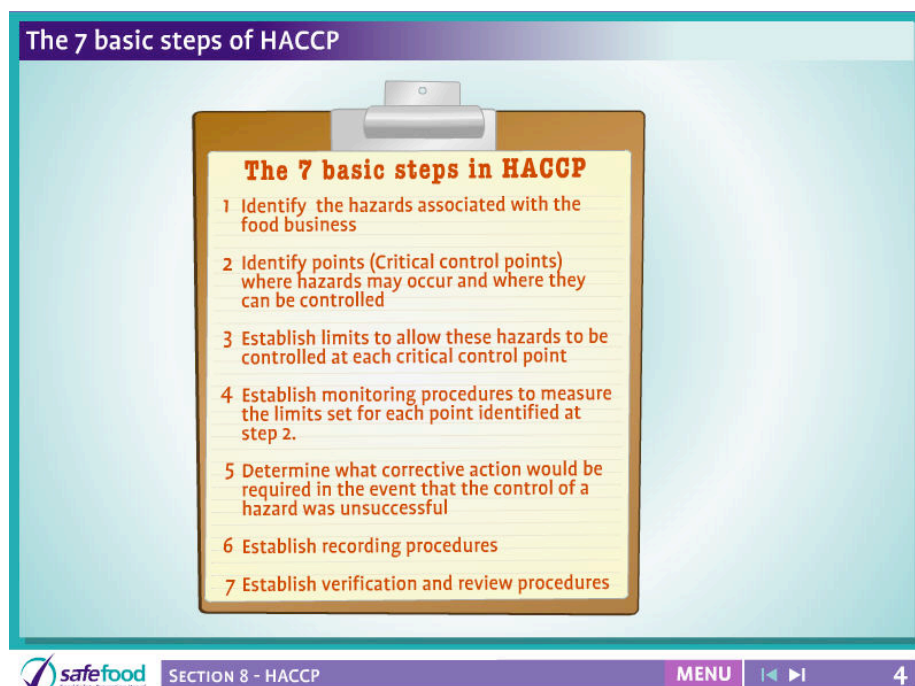
Anything that could cause harm to consumers

Risk

The likelihood of harm

A hazard is a constant, but the risk is determined by the situation. For example, a tiger is always a hazard to humans, but if it is locked in a cage, then the risk is minimal. In the same way, *Campylobacter* is a hazard that is commonly found in raw chicken, but if the chicken is properly cooked and cross-contamination is prevented then this hazard is of no risk.

Screen 4



The seven basic steps in HACCP

Screen description

Interactive screen, with an area to display the students' suggestions.

Teacher

As each point is read ask the students to give examples, e.g.

1. The hazard could be a chemical contaminant
2. The hazard may occur if the food is left out when cleaning
3. It is critical to ensuring safety
4. Keep the food covered at all times
5. Is the cover working, should the food be moved?

The points can be entered on screen. When you're ready click the 'Reveal' button to see the definitive answers.

Glossary

Risks: the likelihood of harm

Hazard: A biological, physical or chemical agent in, or condition of, food with the potential to cause an adverse health effect.

Hazard Analysis: The process of collecting and evaluating information on hazards and the conditions leading to their presence to decide which are significant to food safety and therefore should be addressed in the HACCP plan.

Control Measure: Any action or activity that can be used to prevent or eliminate a food safety hazard or to reduce the risk to an acceptable level.

Critical Control Point: A step at which a control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

Seven basic steps in HACCP

In short, there are seven basic stages involved in HACCP:

1. Identify the hazards associated with the food business
2. Identify critical control points where the hazards occur and where they can be controlled
3. Establish limits to allow these hazards to be controlled at each critical control point
4. Establish monitoring procedures to measure the limits set for each point identified in step 2.
5. Determine what corrective action would be required in the event that the control of a hazard was unsuccessful
6. Establish recording procedures
7. Establish verifications and review procedures

Screen 5



The use of a documented food safety management system

Screen Description

The screen shows information on using documentation as part of a food safety management system

Teacher;

Ask the students; why is documentation an important part of a food safety management system.

Dealing with documentation

- It is a Legal requirement to keep records as part of the HACCP based food safety management system
- Record keeping helps to ensure that the business complies with the law and provides evidence of how the food is produced and handled.
- It is essential to know what you are doing and why and keep accurate records

- Your records need to show that the steps in the production and sale of food that are critical to safety are being controlled.
- Some types of records might include refrigerated storage, cooking and holding temperatures, cleaning records, staff training records, pest control and 'goods in' delivery temperatures

screen 6



Steps involved in cooking and serving fresh food

Screen description

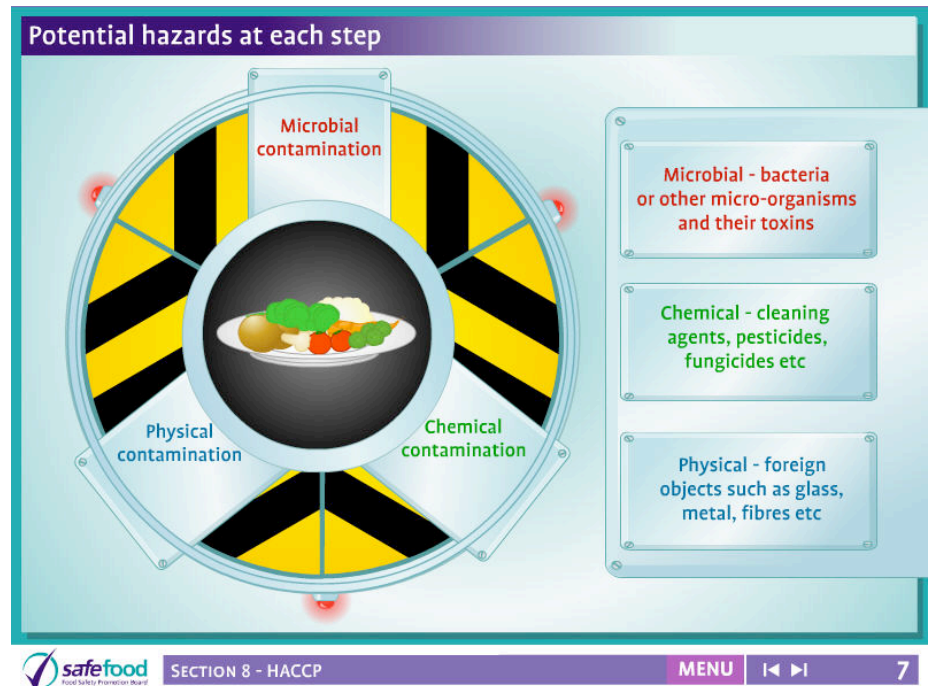
This screen shows the steps involved in a sample HACCP plan.

Teacher

Explain points to the students

1. Delivery
2. Storage in refrigerator
3. Preparation
4. Cooking
5. Serving

Screen 7



Potential hazards at each step

Screen description

As a reminder this screen lists the potential hazards that should be considered at each stage.

Looking at microbial contamination as a hazard in the flow diagram, what measures can be implemented at each step to control the hazard and ensure food safety?

Teacher

Ask the students to list other examples.

At each step there are likely to be several hazards which must be controlled to ensure food safety.

The three main hazards (as discussed in Session 2) in relation to food are:

1. Microbial – bacteria or other micro-organisms, and their toxins
2. Physical – foreign objects such as glass, metal, fibres etc
3. Chemical – cleaning agents, pesticides, fungicides etc

8 Screen



Delivery

Screen description

Interactive screen. Hazards and controls are listed.

Teacher

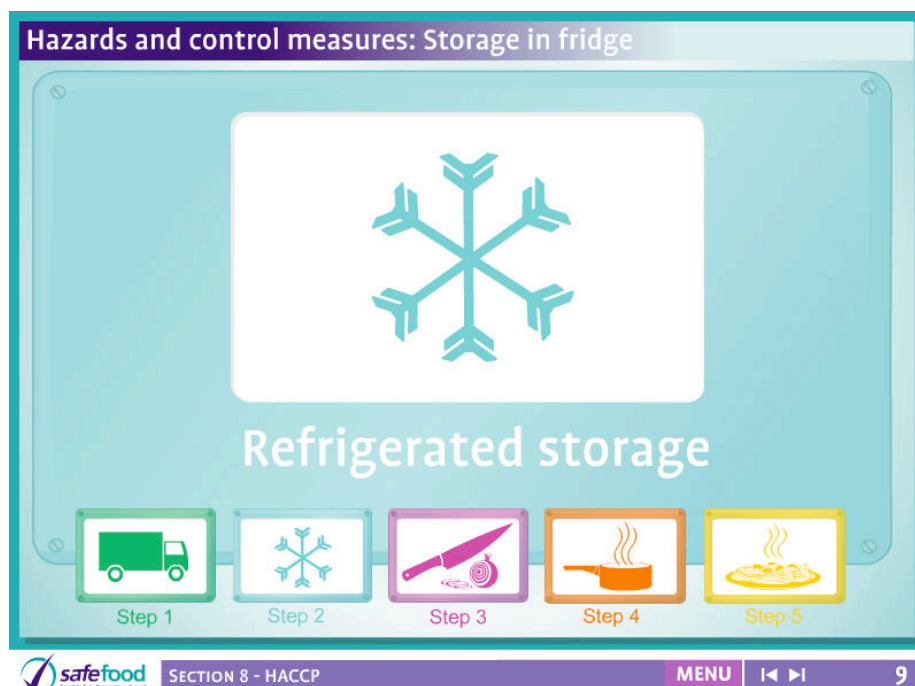
The hazards associated with delivery are listed. Ask the students to suggest controls. When you're ready click the '?' button to reveal the controls.

The microbial (i.e. not physical and chemical) hazards associated with delivery are listed.

HAZARD	CONTROL
Microbial contamination	<ul style="list-style-type: none"> • Use a reputable supplier • Check cleanliness of delivery vehicle and driver • Train staff in temperature controls • Check delivery for broken packaging

HAZARD	CONTROL
Microbial growth	<ul style="list-style-type: none">• Specify delivery requirements especially time/temperature• Ensure temperature on arrival to premises is below 5°C• Minimise time for unloading and storage• Check best before dates

Screen 9



Storage

Screen description

Interactive screen. Hazards and controls are listed.

Teacher

The hazards associated with storage are listed. Ask the students to suggest controls. When you're ready click the '?' button to reveal the controls.

Ask the students which they believe to be the most important point and why.

Fridge must be below 5°C in order to prevent the foods being stored in the temperature danger zone.

HAZARD	CONTROL
Microbial growth	<ul style="list-style-type: none">• Refrigerator must operate at below 5° C• System of stock rotation in place• Cleaning/ disinfecting• Staff training

Screen 10



Preparation

Screen description

Interactive screen. Hazards and controls are listed.

Teacher

The hazards associated with preparation are listed. Ask the students to suggest controls. When you're ready click the '?' button to reveal the controls.

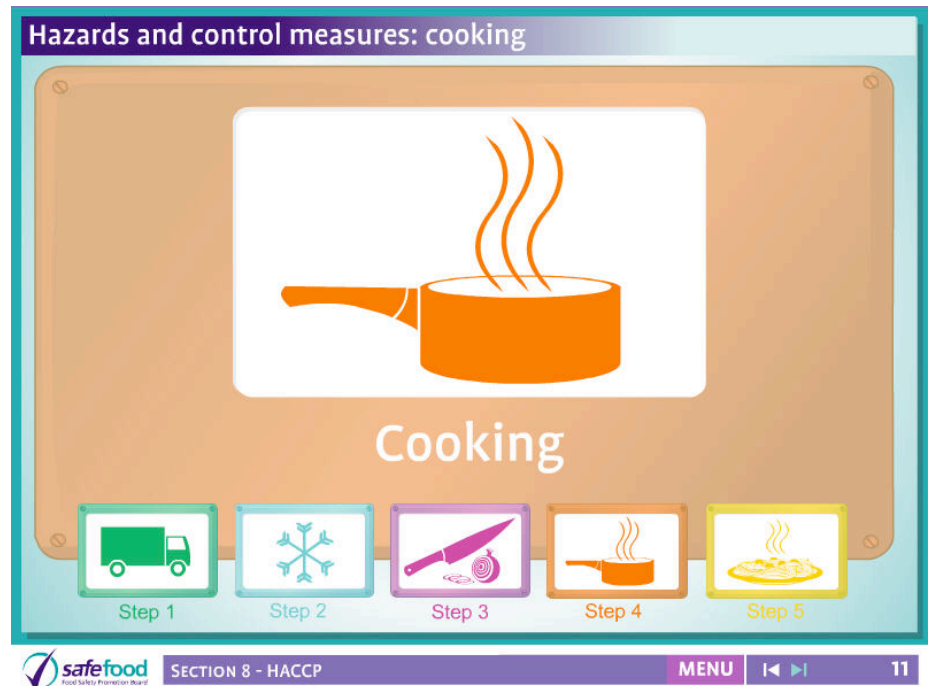
Ask: Why are control measures necessary?

To prevent contamination

HAZARD	CONTROL
Microbial Contamination	<ul style="list-style-type: none"> • Good personal hygiene/training • Good operational hygiene • Cleaning/ disinfecting

HAZARD	CONTROL
Microbial growth	Minimise time at room temperature

Screen 11



Cooking

Screen description

Interactive screen. Hazards and controls are listed.

Teacher

The hazards associated with cooking are listed. Ask the students to suggest controls. When you're ready click the '?' button to reveal the controls.

Ask the students to highlight the most critical point here in relation to food safety.

Cook to a minimum core temperature of 70°C for 2 minutes.

This has to be done to destroy any pathogens that may be present in the foods.

HAZARD	CONTROL
Microbial/toxin survival	<ul style="list-style-type: none">• Minimise time at room temperature• Pre-heat oven• Cook to a minimum core temperature of 70°C for 2 minutes• Staff training

Screen 12



Serving

Screen description

Interactive screen. Hazards and controls are listed.

Teacher

The hazards associated with serving are listed. Ask the students to suggest controls. When you're ready click the '?' button to reveal the controls.

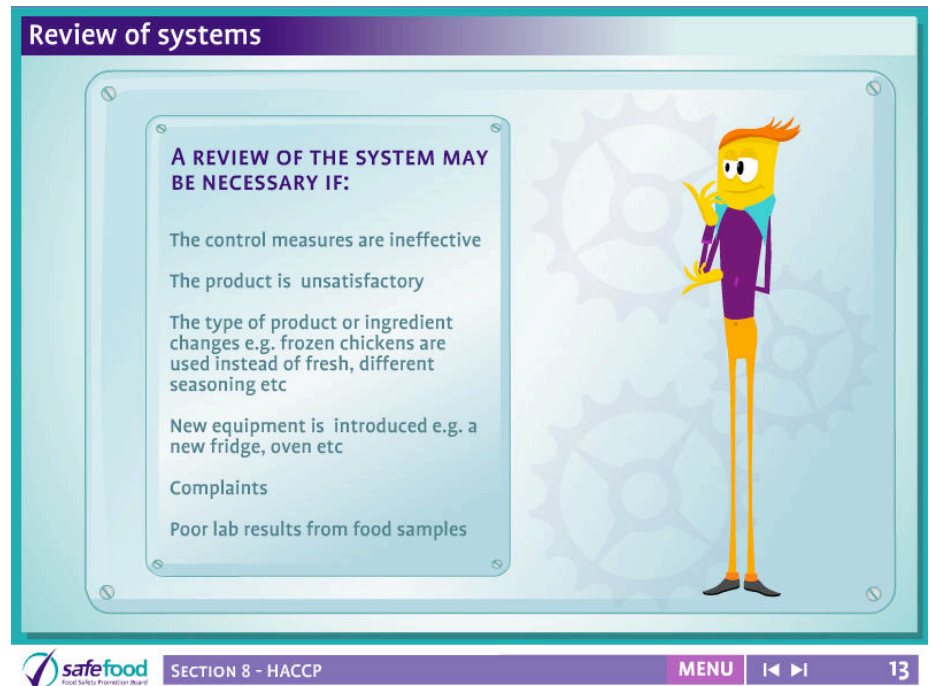
Ask the students how the food could be contaminated after cooking, e.g. dirty utensils, surfaces.

How could microbial growth take place?

If food is held for too long at the wrong temperature.

HAZARD	CONTROL
Microbial contamination	<ul style="list-style-type: none">• Serve immediately or• Serve within 90 minutes holding it above• 63°C (time/temperature)
Microbial growth	<ul style="list-style-type: none">• Good personal hygiene/training• Cleaning/disinfecting

Screen 13



Review of the system

Screen description

This screen shows points relating to reviewing the system.

Teacher

Ask if anything has been left out.

The system should be reviewed if it fails to prevent contamination of a food.

A review of the Hazard Analysis and Critical Control Point (HACCP) system will be necessary if:

1. The control measures are ineffective
2. The product is unsatisfactory
3. The type of product or ingredient changes, e.g. frozen chickens are used instead of fresh, or different seasonings are used
4. New equipment is introduced, e.g. a new refrigerator, cooker.

5. Complaints

6. Poor lab results from food samples.

14 Screen

Sample HACCP plan - Making a cold meat sandwich

STAGE OF PREPARATION	HAZARD	CONTROL
Purchase of supplies i.e. butter, bread and cold meat	Contamination of the raw ingredients	Buy ingredients from a reputable supplier
Delivery of ingredients	Presence of physical contaminants	Visual inspection
Delivery of ingredients	Lack of refrigerated vehicle for transport or incorrect thermostat	Check temperature on delivery
Storage of ingredients	Incorrect refrigerated storage or dry goods	Check temperature and storage location in the fridge & dry store
Preparation of sandwich	Cross contamination physical or chemical contamination	Use zones in the kitchen Ensure that staff have good personal hygiene
Storage of sandwich	Temperature of food on display counter	Check temperature of food counter
Sale of sandwich	The buyer stores the sandwich at room temperature	Put a use-by date and time on the wrapper



SECTION 8 - HACCP

MENU



14

Sample HACCP plan

Screen description

This screen shows a sample HACCP plan

Teacher

Ask how does HACCP help prevent food poisoning?

By analysing the hazards at each stage of production and by suggesting controls to prevent the hazard.

Seven Basics Steps

1. Analyse the hazards to food safety at every stage of food handling in that particular business
2. Assess the level of risk from each hazard
3. Decide the most critical points at which there must be food safety controls – this

could be the time and temperature control for cooking a joint of meat for example

4. Implement appropriate controls for eliminating hazards, if this is possible, or reducing the risk from each hazard to the lowest possible level
5. Establish a monitoring system to ensure that the controls are effective – what should happen does happen
6. Set up procedures to correct any food safety problems
7. Review the system from time to time and whenever operations change