ADDITIONAL INFORMATION

POWERPOINT 1 - 5

HAZARDS

There are a number of factors, which need to be assessed, that will assist in decisions about potential hazards. The following is based on these questions:

a) Raw materials

- What hazards are likely to be present in each raw material?
- Are any of the raw materials themselves hazardous if excess amounts are added?

b) Design of premises and equipment

- Where are the risks of cross contamination?
- Are there any stages where contamination could build up?
- Are there any stages where biological hazards might grow to a dangerous level?
- Can the equipment be effectively cleaned?
- Can the equipment be effectively controlled within the required tolerances for safe food preparation?
- Are there any extra hazards associated with any particular equipment?

c) Intrinsic factors

- Do the product's intrinsic factors, such as pH, etc. effectively control all biological hazards likely to be present in the raw materials, or which could enter the produce as cross contaminants during the preparation?
- Which intrinsic factors must be controlled to achieve food safety?
- Will biological hazards grow or survive in the product formulation?

d) Process design

- Will biological hazards survive any heating step in the process?
- Is there a step in the preparation that will destroy all pathogens?
- Does the use of recycled product cause a potential hazard?
- Does the biological hazard that is present produce a toxin?
- Is it harmful or resistant in any way?
- Is there a risk of recontamination between preparation steps?

e) Facility design

- Are there any hazards with the general layout of the food production areas?
- Is segregation between raw and ready to eat food present?
- Do movement patterns for personnel and equipment cause any hazards?

f) Personnel

- Could food-handling practices affect the safety of the food?
- Are all food handlers adequately trained?
- Are there illness-reporting procedures in place?

g) Packaging

- How does the packaging environment influence the growth and/or survival of biological hazards?
- Does the packaging have all required labelling and instructions for safe handling and use?
- Are these requirements easily understood?
- Is the packaging damage proof and are there tampering mechanisms in place?

h) Storage and distribution

- Could the food be stored at the wrong temperature?
- Will this affect the food safety?
- Could the food be abused by the customer, causing it to be unsafe?

These questions are not exhaustive; you may have additional ideas relevant to your particular food.

MICROBIOLOGICAL HAZARDS

Most catering establishments will be at risk from one or more biological hazards.

Bacteria

Bacteria are single-celled living organisms and are the major cause of food poisoning throughout the world.

For the HACCP team to identify bacterial hazards associated with their food, they will need detailed knowledge of bacteria. This will include:

Growth Requirements

The following are the main growth requirements for bacteria:

- Temperature - bacteria have a minimum and a maximum temperature for growth between which there is an optimum temperature when multiplication is the most rapid. The danger zone is between 5 - 60°C, with the best temperature being your body temperature, ie. 37°C.

- Moisture - all living matter requires water, which is used to transport nutrients into the cell and take away waste products. Dry foods such as bread, biscuits and flour are poor media for bacterial multiplication. Food such as meats and dairy products has sufficient moisture to promote bacterial growth.

- Nutrients - bacteria need food to grow including high protein foods such as milk, eggs, meat and fish.

- Time - given the right food, temperature and the right amount of moisture, bacteria can generally grow at a rate of 10-20 minutes.

- pH - the pH of a food is measured on a scale of 0 to 14. Acidic foods have pH values of less than 7, with alkaline foods above 7. The pH value of 7 is neutral which is usually the optimum pH of bacterial growth.

- Presence with/without oxygen - some bacteria need oxygen, some do not need oxygen and in fact will die if oxygen is present. Some bacteria can survive with or without oxygen.

- Competition - when there are many different bacteria present, they will compete for the same food. Fortunately, most food poisoning bacteria are not as competitive as the normal flora found on food and unless present in high numbers, will usually die.

The bacterial growth curve shows the growth cycle of bacteria, including:

- lag phase - no multiplication present
- log phase - rapid multiplication
- stationary phase - numbers of bacteria remain constant as the number produced is equal to the number dying
- decline phase - numbers decrease as numbers dying exceed those produced

The following are the main pathogenic bacteria that will need to be controlled in a catering environment:

- Salmonella spp.
- Clostridium perfringens
- Staphylococcus aureus
- Bacillus cereus
- Streptococcus spp.
- Clostridium botulinum
- Vibrio parahaemolyticus
- Escherichia coli
- Yersinia enterocolitica
- Aermonas hydrophila

Typical foodborne infections include:

- Listeriosis
- Campylobacter
- Verocytotoxin - producing E.coli0157 (VTEC)

Certain bacteria can produce toxins that can cause death. They can also be heat resistant.

Exotoxins - these are highly toxic proteins that usually are produced during the multiplication, or sporulation of some bacteria and include staphylococcus aureus and Bacillus cereus. Quite often these toxins are produced in food and occasionally are heat resistant so that, although cooking may destroy the bacteria, the toxin is unaffected and can still cause problems if the food is eaten.

Endotoxins - these form part of the cell wall and are released on the death of the bacteria. They are commonly produced in the intestines of persons consuming food contaminated by such organisms as salmonella.

Viruses

Outbreaks of food poisoning are increasingly being attributed to microscopic virus particles. As these organisms only multiply in living tissue the breakdown in hygiene, particularly in relation to temperature control, which normally precedes bacterial food poisoning, is not an essential prerequisite to the outbreak. The infective dose is thought to be small.

Viruses can be killed by heat of normal cooking and incidents usually involve raw food, especially shellfish such as oysters, or food contaminated after cooking.

Moulds

Moulds grow quickly, so the tangled mass of mould can easily be seen as a fuzzy growth. It was once thought that moulds were not harmful to humans but we do know that certain moulds produce toxins, such as aflatoxins that have been linked to incidents of food-borne illness. Also, certain other moulds can cause serious infections and allergies.

Mostly moulds affect the quality of the food.

Yeasts

Yeasts are fungi. Since they require sugar and moisture for survival, they often consume these ingredients from food, thus spoiling the food at the same time.

Yeasts can be killed by heating the food products. There is no evidence that the diseases that yeast cause can be transmitted by food or that the yeasts occurring naturally in foods are harmful to human beings. However, since yeasts spoil food, they still need to be controlled.

CHEMICAL HAZARDS

Chemical contamination of foodstuffs can happen at any stage of their production, from growing of the raw materials through to consumption of the finished product. The effect of chemical contamination on the consumer can be long term (chronic) such as for carcinogenic or accumulative chemicals (eg. mercury), which can build up in the body over many years, or it can be short term (acute) such as the effect of allergenic foods. The current main chemical hazard issues in food products are as follows:

a) Cleaning chemicals

In any food production operation, cleaning chemicals are one of the most significant chemical hazards. Cleaning residues may remain on surfaces or utensils or within pipework and be transferred directly on to food, or they may be splashed on to food during the cleaning of adjacent areas.

It is therefore vitally important that the HACCP team members consider the implications of the cleaning procedures in their operation. Problems can be prevented by the use of non-toxic chemicals and through the design and management of appropriate cleaning procedures. This will include training of staff and may involve post-cleaning equipment inspections. Storage of chemicals in suitably labelled containers will also assist in the reduction of chemicals ending in the food.

b) Pesticides

Pesticides are any chemicals, which are applied to control or kill pests and include the following:

insecticides, herbicides, fungicides, wood preservatives, bird and animal repellent, and rodenticides.

Pesticides are used in a wide range of applications all over the world, including agriculture, industry, shipping and the home.

In agriculture, pesticides are used during production to protect crops and improve yields. After harvest they are again used to protect the crops in storage. However, not all pesticides are safe for the use in food production, and even those which are may leave residues which could be harmful in high concentration. To overcome these problems most countries have very strict control on the use of pesticides and on acceptable residue limits.

From the food safety point of view, you need to know which pesticides have been applied to all your raw materials at any stage in their preparation. You must also understand which pesticides are permitted for use and their maximum safe residue limits.

You should also consider the possibility of cross contamination with pesticides at any stage in food production, eg, with your raw materials or it could happen on your site, i.e. rodenticides.

c) Allergens

Some food compounds can cause an allergic reaction or food intolerance response in sensitive individuals. These reactions can vary from mild to extremely serious, depending on the dose and the consumer's sensitivity to the specific allergen.

A caterer who produces several different products must also consider the chance of cross contamination of allergenic components into the wrong product where they will not be labelled. Special care must be taken when declaring a generic category of ingredient such as fish or nuts, where certain individuals are allergic to specific types of these species.

d) Toxic metals

Metals can enter food from a number of sources and can be harmful in high levels. The most significant sources of toxic metals to the food chain are:

- environmental pollution
- the soil in which food stuffs are grown
- equipment, utensils and containers for cooking, processing and storage
- food processing water
- chemicals applied to agricultural land

Other possible chemical hazards include nitrites, nitrates, plasticisers, packaging migration, veterinary residues and chemical additives.

Physical Hazards

Physical contaminants found in food may be brought into the food premises with the raw materials or introduced during storage, preparation, service or display. It is essential that supervisors are aware of the types of foreign bodies commonly found in the food industry and that they take all reasonable precautions. A record of all customer complaints and steps should be kept to identify the source of the contaminant. Contamination of food by extraneous matter will cause customer dissatisfaction and may result in bad publicity, fines or closure.

Foreign bodies, such as bone in chicken meat or stalks in vegetables, are intrinsic and should be minimised by harvesting and processing. The presence of extrinsic foreign bodies in food, such as glass or rodent droppings, is usually of greater concern as this indicates a breakdown in hygiene, which will not be tolerated by the customer.

Although in the minority, some foreign bodies may be considered as a serious health hazard such as glass, stones, wire or rodent droppings, which may result in cut mouths, dental damage, choking or illness.

All foreign bodies are at the very least a nuisance, and appropriate measures must be implemented to prevent or remove such contamination. The hazard analysis system provides the most effective preventative approach and will be extremely useful if the company wishes to avail itself of the due diligence defence.

Person

Contaminants from the food handler include earrings, watches, necklaces, rings, buttons, band aids, hair, fingernails, cigarette ends, matches, sweet wrappers, combs and pen tops.

Control methods include training of the food handler, company food safety policy, prohibition of wearing of jewellery, except wedding rings, prohibition of eating and smoking in the food area, supplying and wearing of coloured band aids (blue), suitable covering of hair and outdoor clothing.

Product

Contaminants from the product include bones, stones, stalks, pips, nutshell, glass, wood, metal, plastic and pests.

Control measures include supplier audits, specifications, visual inspections when receiving, filtering, sieving, screening, washing, magnets, sifting, metal detection, de-boners and electronic scanning.

Plant

Contaminants from the plant include metal, glass, paint, wire, plastic, rubber, wood, nuts, bolts, grease, rust and oil.

Control measures include training of staff, regular inspection of machines, maintenance defect reporting system, regular upgrading and replacement of machines/equipment, metal detectors, use of food grade grease/oil, exclusion of wooden equipment, equipment design, magnets, sieving and non-use of glass.

Pests

Contaminants from pests include bodies or parts of bodies, droppings, urine, larvae, hair and eggs.

Control measures include training of staff, good housekeeping, regular inspections, covering of food, active pest control system, building maintenance including flyscreening, solid walls etc., waste management.

Packaging

Contaminants from packaging include wood, string, staples, glass, plastic, cardboard, cloth, rubber, metal, tape, paper and tin.

Control measures include decanting in a separate area to that of the food preparation area (quarantine area), careful opening of packaging, use of coloured string, elimination of glass, exclusion of wood and non-use of staples.

Premises

Contaminants from premises include paint, tiling, wood, glass, plastic, rust, metal, nuts, wire screws and nails.

Control measures include inventory of maintenance equipment, training of maintenance staff, repair of worn areas, stopping food preparation when repair work is undertaken, non-use of wood/glass, training of staff, defect reporting procedures, metal detection, magnets and visual inspections.

ADDITIONAL INFORMATION

POWERPOINT 6

Once the hazards on your particular food products are identified, then the next step is to assess the risk of each hazard actually occurring.

The term 'risk' can be defined as the likelihood of the hazard occurring.

The HACCP team will need to consider the risk associated with each potential hazard. Begin by asking yourselves whether a particular issue is a significant or real hazard or not. For example, Salmonella spp. would only be a hazard in a raw material if it were likely to be found from time to time, eg. in raw milk. There is little point in setting up a HACCP system to control a potential hazard, which will never occur. However, caution must be employed when ruling out potential hazards from a process. You must be absolutely sure that there is no risk and that they are never likely to occur. If in doubt, assume that the hazard may occur, and this will be addressed when the CCP's are determined.

Control Procedures

Once all potential hazards have been identified and analysed, the next step is to list the associated preventative measures. These are the control mechanisms for each hazard and are normally defined as those factors, which are required to eliminate or reduce the hazard to an acceptable level.

Control procedures can be defined as methods, which can be used to control an identified health hazard.

When evaluating your control procedures, it is vital that you consider the control mechanisms you already have in place and what new measures may be needed to be put in place. This is where your production flow chart will be very useful, as you can easily place these present control procedures on to the flow chart.

It is important to remember that more than one control procedure may be required to control a hazard, which occurs at different stages of the process. An example could be with the potential hazard of Listeria monocytogenes before and after cooking in a high risk, ready-to-eat food establishment. For contamination to take place before cooking the heat process might be the control method, while environmental control would be required to prevent contamination after cooking. Another point to consider is the fact that one control method might control more than one hazard, eg. two microbiological pathogens by a heat process, or glass and metal by sifting.

The following are examples of control procedures:

Biological Procedures

- Purchase & delivery - use reputable suppliers, audit of suppliers, correct temperature control.
- Storage - storage at correct temperature, cover/wrap foods, separate raw/cooked foods, stock rotation.
- Preparation - limit the time food is at ambient temperatures during preparation, use clean equipment, good personal hygiene.
- Cooking - cook to centre of food, i.e. above 75°C.
- Cooling - cool food rapidly, refrigerate when cooled below 5°C, keep food covered where possible.
- Chilled storage - store at correct temperature, cover/wrap foods, good stock rotation, separate raw and cooked foods.
- Rethermalisation - reheat to centre temperature 70° - 75°C.
- Hot holding & service - keep food above 60°C, use clean equipment, keep food covered.
- Cold services - keep cool below 5°C, use clean equipment, keep covered.

Physical Hazard Procedures

- Visual inspection of foods.
- Decanting of foods away from food preparation area.
- Thorough cleaning of work surfaces.
- Correct waste disposal.
- Good personal hygiene - no jewellery, proper protective clothing/headcover.
- Coloured band-aids.
- No temporary repairs to equipment.
- Regular inspection and maintenance of equipment.
- Covering of food.
- Removal of wood and glass from food areas.
- Training of staff.

- Food safety policy.
- Active pest control system.
- No smoking.
- No eating.
- Sieving.
- Use of food grade oil/grease.

Chemical Hazard Procedures

- Training of staff.
- Correct storage of chemicals away from food.
- Clearly labelled chemical containers.
- Not using food containers for the storage of chemicals.
- Ensuring no chemical residues are left on food contact surfaces and equipment.
- Supplier audits.
- Certificate of quality from supplier.

Critical Control Points

It is likely that you will have many controlling steps in your process, some of which are controlling hazards we have just mentioned, and others, which are not directly associated with control of safety.

The term **critical control point (CCP)** can be defined as the steps in the preparation of the food that must be controlled to either eliminate or reduce the hazard to an acceptable level.

CCP's are essential for product safety, as they are the points where control is ultimately affected. However, the CCP itself does not implement control. Instead it is the action, which is taken at the CCP, which controls the hazard.

It is vital that the number of CCP's are kept to the steps in the preparation of the food which are truly critical to product safety. This usually means that the number of CCP's are kept to a minimum in order to focus attention on the essential controlling factors.

HACCP is all about what is critical to product safety and so the food safety program is built around CCP's.

CCP's can be identified by using your thorough knowledge of the process and all the possible hazards to decide on the best preventative measures for their control.

The information established during the hazard analysis should allow the identification of CCP's through the expert judgement of the HACCP team and specialist advisers.

However, the location of CCP's using judgement alone may lead to more points being managed than are really necessary. There is always the tendency to stay on the side of caution but designating too many points as CCP's, rather than correctly identifying the real CCP's, may mean a loss of focus, as you will always have some points where you are prepared to negotiate a deviation.

On the other hand, too few CCP's would be even more disastrous and could cause the sale of unsafe food. It is important that control is focused where it is essential for food safety, so care should be employed to ensure that the CCP's are correctly identified.

ADDITIONAL INFORMATION

POWERPOINT 7 - 8

Critical Limits

Once the CCP's have been identified, the next step is to decide how they will be controlled.

Clear criteria must be established which will indicate the difference between a safe and unsafe product. This will allow a parameter to be devised for the process.

The term **critical limit** can be defined as the criteria, which must be met for each preventative measure at a CCP - the absolute tolerance for safety.

Basically, each CCP will either have just one critical limit, or there may be an upper and a lower critical limit. The product will be safe as long as the CCP is monitored and the preventative measures fall within the guideline of the critical limit.

It is vital that the right critical limits are set and put in place. You must have detailed knowledge of the potential hazards, along with a full understanding of the factors, which are involved in their prevention or control. Critical limits might well be different from the existing processing parameters.

Every CCP will have a number of different factors, which need to be controlled to ensure product safety, with each of these factors having an associated critical limit.

Cooking might be a CCP but the factors that will be associated with a safe food product will be the time and temperature of the product.

In order to set the critical limits all the factors associated with the safety at the CCP must be identified. The level at which each factor becomes the boundary between safe and unsafe food is then the critical limit. The critical limit must be associated with a measurable factor, which can be monitored routinely.

ADDITIONAL INFORMATION

POWERPOINT 9 - 11

Monitoring Procedures

Monitoring is the measurement or observation at a CCP that the process is operating within the critical limits. It is one of the most important parts of the HACCP system, ensuring that the product is prepared safely from day to day.

The specific monitoring procedure for each individual CCP will depend on the critical limits, and also on the capabilities of the monitoring device or method. It is essential that the chosen monitoring procedure must be able to detect loss of control at the CCP, as it is on the basis of monitoring results that decisions are made and action taken.

There are two types of monitoring procedures:

On-line systems, where the critical factors are measured during the process. These may be done by continuous systems where critical data are continuously recorded, or discontinuous systems where observations are made at specified time intervals during the process.

In off-line systems, samples are taken for measurements of critical factors elsewhere. Off-line monitoring is normally discontinuous and has the disadvantage that the sample taken may not be fully representative of the whole batch.

The best type of monitoring procedure is an on-line continuous system which can be set up to detect drift in the process and cause change to prevent the CCP from going out of control.

Frequency of monitoring

The frequency of monitoring will depend on the nature of the CCP and the type of monitoring procedure. It is important that the HACCP team defines the appropriate frequency for each monitoring procedure.

The following are a couple of examples of monitoring procedures in a catering environment:

Samples of food may be taken for bacteriological examination to determine the acceptability or safety of a batch of food intended for human consumption.

Unacceptable numbers of bacteria in the sample usually reflect poor handling techniques, under-processing, post-process contamination or incorrect storage.

A sampling programme should be designed to ensure the appropriate frequency of sampling of specific foods from particular premises. The programme should be based on the fact that safe food is the main objective with sampling a monitoring procedure for the CCP and its critical limit.

ADDITIONAL INFORMATION

POWERPOINT 12 - 13

Corrective Action

HACCP principle 5 requires that corrective action be taken when monitoring results show a deviation from the critical limit(s) at a CCP. However, since the main reason for implementing a food safety program system is to prevent problems from happening in the first place, you should also build in corrective actions, which will prevent deviation at the CCP.

Corrective actions should be developed by the HACCP team and be specified on the HACCP control chart. It should also be noted that it is important that responsibility is assigned for corrective action both to prevent and correct deviation.

As noted before, there are two types of corrective actions. They are as follows:

1) Actions to follow to prevent a deviation at the CCP:

This first type of corrective action normally involves the use of target levels within the critical limits. When the process drifts towards or exceeds the target levels it is adjusted, bringing it back within normal operating bands.

This can be typified by on-line continuous monitoring systems which could automatically adjust the process. However, preventative corrective action can also be associated with manual monitoring systems where the CCP monitor takes action when the target levels are approached or exceeded, and thus prevents a CCP deviation.

The factors that are often adjusted to maintain control include:

- temperature and/or time
- ingredient concentration
- flow rates
- sanitiser concentration

Some examples are as follows:

- continue to cook for longer to achieve the correct centre temperature
- chill rapidly to correct storage temperature
- add ingredients such as salt to the recipe

When adjusting the process to maintain control, you must ensure that you can do so without causing or increasing the hazard. For example, if the product temperature had risen above 5°C and you implement rapid chilling to bring it back down, you must know that the temperature has not risen high enough or long enough to allow the growth of any microbiological hazards which might be present.

2) Actions to be taken following a deviation at a CCP

When following a deviation it is important to act quickly. You will need to take two types of action and it is vital that detailed records are kept.

Adjust the process to be brought under control. Adjusting the process will take a similar form to that discussed above for the prevention of deviations. The only difference here is that the process will have to be adjusted further to return to its normal operating level.

Deal with the material which was produced during the deviation period.

In order to effectively handle non-complying materials, you will need to implement a series of further corrective actions. It will depend on the size of your catering organisation/establishment, and whether one or more of the following will apply:

- place all suspect product on hold
- seek advice from your HACCP team
- conduct further tests, where appropriate, to assess the safety

When this information is obtained, the decision can be taken. This would probably be:

- destroy product
- rework into new product
- release product following sampling and testing

Destruction of the non-complying product is the most obvious action, when the risk of the hazard occurring in products which cannot be reworked is high. However this option is costly and therefore normally the last action to be taken. Remember though, product safety is vital.

Reworking the product can be carried out where the hazard is controlled through the reworking process. It is important that reworking does not cause any new hazards in the secondary product, eg. when allergenic ingredients such as nuts are reworked into a product where they do not appear on the pack ingredient listing.

You may decide to sample and test the product to establish whether or not the hazard is present. Great care must be taken when implementing sampling regimes due to the statistical probability of detecting the hazard.

It is important that detailed records of all stages are kept. It is essential that you investigate the cause of the deviation, and take appropriate steps to ensure that it does not happen again. These details should be decided by the HACCP team in conjunction with other management and must be fully documented on the HACCP control chart.

Who is Responsible?

The most important issue with responsibility is that it must be properly defined. All personnel involved need to clearly understand what they are required to do and also how to do it. These details are decided by the HACCP team in conjunction with other management and must be fully documented on the HACCP control chart.

1) Responsibility for monitoring

Monitoring is a key part of the food safety program system operation, and it is therefore vital that the persons involved in monitoring understand that they are fully accountable for their monitoring actions. Monitoring procedures are closely related to the production process, so it is usually most appropriate that the responsibility for monitoring lies with the food handling staff that are involved with the cooking/preparation.

2) Responsibility for corrective action

Responsibility for corrective action will again often lie with the food handling staff that are involved with the cooking/preparation of the food, but you should consider assigning particular responsibilities at different levels in the management structure.

On-line responsibilities of the CCP monitor will most likely involve the notification of a supervisor who will then coordinate further actions. However you may wish to give responsibility at this level for stopping the production in order to prevent large quantities of product being made while the CCP is out of control.

More senior responsibility will be appropriate where the corrective actions involve closing the kitchen down completely for periods of time or where deposition actions are required.

It is important to ensure that the individual responsibility for documenting and signing off corrective action procedures are defined. This information is crucial in proving that the required action has been taken, and particularly important for legal issues.

ADDITIONAL INFORMATION

POWERPOINT 14 - 16

The following are templates for the records listed on PowerPoint slide 10.

More record templates need to be designed for the support program as shown on slide 11. Those records need to be designed to meet the company's needs.

Record 1 Approved Food Suppliers List

Photocopy this page before Use

Foods: (for example: Canned fruit, meat)	**Details of Supplier (Name, address, phone)**	**Food business registration number (if in Victoria) Other registration number/quality system (outside Vic) or ABN**	**Date approved as your supplier**
Salamis	Giovanni's Smallgoods P/L 7 Sausage St, Hamburg, 2345 6789	abc 123	January 14, 2001

Record 2 Goods Receiving Form

Photocopy this page before use

Date	Time	Supplier (Write 'Self' if you are buying and transporting food yourself. Eg. from market)	Food Type	Food Temperature (High Risk Foods)	Best before/ Use by date	Accept (A) or reject (R)	Initials	Problems and corrective actions
15/3/01	1.00pm	Giovanni's Smallgoods	Salami	4°C	Jan 2003	A	JB	

Record 3 Storage Units Temperature Log

For the week starting / /

Check Temperature of all units at lease twice a day.

Correct Temperature:

- Freezers should be –15°C or frozen hard
- Cool holding units should be 5°C or colder

Unit	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
	Time	Temp	Time	Temp	Time	Temp	Time	Temp	Time	Temp	Time	Temp	Time	Temp
	am/pm		am/pm		am/pm		am/pm		am/pm		am/pm		am/pm	
Fridge	11:00am	5°C	10.30am	4°C	10.20am	4.5°C	11.10am	2°C	9.30am	5°C	11.30am	4°C	N/A	N/A
Corrective Actions (date and action taken)														

Record 4 Ready to Eat Food on Display Log

Cold High Risk ready to eat food should be held at 5ˆC or colder
Hot High Risk ready to eat food should be held at 60ˆC or hotter
High Risk ready to eat food may be held outside these temperatures for up to a cumulative total of four hours. If, for example, it takes 1 hour to prepare a product out of refrigeration, it can only be on display for a further 3 hours.
You need to keep records of how long high-risk foods are displayed in the Temperature Danger Zone of between 5ˆC and 60ˆC. You should record:

- Date
- Type of food or dish
- Time that food was removed from temperature control (for example, when it was removed from the fridge)
- Time that food was returned to temperature control (for example, when food is prepared and returned to the fridge)
- Time the food is be the thrown away

Photocopy this page before use

Date	Type of Ready to eat Food For example: sandwiches, quiche, platters, prepared salads, or foods including meat, seafood, poultry, eggs and dairy products	Time in Temperature Danger Zone	Time out Temperature Danger Zone	Time food used or discarded after 4 hours (cumulative time)
15/01	Coleslaw Salad (prep)	11.40am	11.40am	
15/01	Coleslaw Salad	12.00pm	3.00pm	3.01 pm

Record 5 Equipment Calibration Log

Photocopy this page before use

Piece of equipment	Name of calibration contractor (Write 'Self' if doing own check)	Date of Service	Pass or fail	Corrective action taken (if any)
Probe Thermometer	Thermometers R Us	12/10/01	Fail	Batteries replaced

Record 6 Internal Review - Process Temperature Log
Photocopy before use

This record is to be used by the Food Safety Supervisor once a month. The record verifies that your food making processes are meeting the time and temperature controls.
You should complete this record by logging the processes of at least two menu items or products on a set date, once a month. Photocopy the record sheet before using it. Full instructions are contained on page 77.

Month

Menu Item	Process																
	Date																
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
	Time																
	Temp°C																
	Time																
	Temp°C																
Comments/ Observations																	
Corrective Action																Signed	

Menu Item	Process																
	Date																
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
	Time																
	Temp°C																
	Time																
	Temp°C																
Comments/ Observations																	
Corrective Action																Signed	