



Name of business:

# Food Control Plan

## Food Service and Food Retail

### Template – March 2017

#### Specialist Food Service and Catering – Serve Safe

For food service businesses that prepare or manufacture and serve food for immediate consumption.

Add to the food service and retail *Basics Pack*.



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# Defrosting frozen food

## Goal

To ensure that thawing is done in ways that minimise contamination of other foods and food surfaces, and prevent the growth and spread of microorganisms.

To ensure that defrosted food is thawed thoroughly before processing or sale.

To ensure that previously frozen food is not refrozen.

Act requirements:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food and prevents food containing unexpected or unreasonable substances.
- There must be procedures for controlling hazards at each processing and handling step, where it is essential to eliminate or reduce a hazard to an acceptable level.

## Why?

- Juices containing harmful microbes from thawing food that directly contaminate other foods and surfaces used for other foods could make people ill.
- Food that is still frozen or partially frozen when cooked might not reach the cooking temperature needed to destroy harmful microbes.
- Toxins from harmful organisms may have formed in defrosted products that are refrozen before further processing.

## How this is done

Food must be thoroughly defrosted before cooking (unless the manufacturer's instructions state otherwise).

This is done by:

- planning ahead and allowing enough time and space to defrost food in the fridge or chiller;
- defrosting food in a way that prevents dripping and contamination of other foods or surfaces (e.g. defrosting in a dish or container and never defrosting food above ready-to-eat food);
- making sure food thawed at room temperature is refrigerated or used as soon as possible once it's thawed.

When it's not possible to defrost food in the fridge or chiller, the following procedure(s) will be followed:

[tick as appropriate]

- food is thawed in the microwave (if using this method, then use the food as soon as it's defrosted)
- food is put into an air-tight container and then placed under cold running water
- food is defrosted on a bench for a period not exceeding four hours.

Check defrosted food before cooking, to make sure that the centre has thawed.



**Do not refreeze thawed ready-to-eat food.**



## What if there is a problem?

If food has not fully defrosted, continue to defrost the food until no ice crystals are left. Check again before cooking.

Speed up the defrosting process (e.g. divide the product into smaller portions).

## Write it down

You must write down in the Diary what action you took if food was not properly defrosted.

Handwriting practice area with a light blue background and horizontal lines. The first line contains the instruction: "You must write down in the Diary what action you took if food was not properly defrosted." The remaining lines are blank for writing.



### Thawing tips

If you regularly thaw the same type/size/weight of food, calculate how long it takes to do this so that you'll be able to allow the right amount of time in the future.

Note down the time you start to thaw the food, the temperature of the refrigerator it's being thawed in and the time when the centre of the food has defrosted.



# Preparation

## Goal

To prevent food from contamination during preparation from:

- microbes, e.g. bacteria and viruses;
- physical, e.g. hair, packaging;
- chemical, e.g. cleaning chemicals, pesticides.

To prevent the growth of harmful microbes that may be present in food from multiplying to harmful numbers.

Act requirements:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food, and prevents food from containing any biological or chemical agents or other substance that would be unexpected and unreasonable in food.
- There must be procedures in place that prevent, eliminate or reduce hazards during the production, processing and handling of food along with the criteria and reason for each criterion.
- Packaging and anything else in contact with food must not create or contribute to hazards and be able to maintain food safety and suitability.
- Food must be safe and suitable.

## Why?

- Harmful microbes will grow rapidly at temperatures between 5°C and 60°C (the temperature danger zone).
- Harmful microbes can contaminate food through unclean people, equipment and utensils.
- Food contaminated by chemicals can cause illness.
- Objects can fall into uncovered food affecting its suitability and/or safety.

## How this is done

Food preparation surfaces must be clean and, if necessary, sanitised before use (see *Cleaning*).

Good personal hygiene practices must be followed (see *Hand hygiene and Personal hygiene*).

Avoiding cross-contamination

Ready-to-eat food must be protected from contamination from surfaces (including equipment and utensils) that have come into contact with raw or uncooked food by:

- using a defined area in the kitchen to prepare raw food that is separate from cooked or ready-to-eat food; or
- preparing raw and ready-to-eat food at different times with thorough cleaning and sanitising in between.

(see *Preventing cross-contamination*)



*Using different cutting boards and/or surfaces that are dedicated to a particular food is one way to help prevent cross-contamination. You can either clearly mark what each surface is used for or use a colour-code system.*

The following cutting boards are used for each of these foods:

- \*raw meat
- \*raw poultry
- \*raw fish
- \*fruit and vegetables
- \*cooked meat/poultry.

\*Write down what cutting board is used for which food (e.g. red for raw meat).

All staff who prepare food must know which preparation surface is to be used with which foods.

## How this is done

### Fruit and vegetables

The outer surfaces of fruit and vegetables must be washed before cutting or serving to remove any chemicals or harmful microbes present.

### Eggs

Whole eggs must be clean and free from cracks.

Egg pulp must be pasteurised when being used for uncooked or lightly cooked foods and used in accordance with its date mark.

### Piping bags [tick as appropriate]

- Disposable single-use piping bags are used.
- Reusable piping bags are used; and
  - they are cleaned and sanitised between tasks;
  - separate piping bags are used for different purposes;
  - piping bags are replaced as appropriate.

### Time, temperature and food safety

- The time potentially hazardous food is left at room temperature (the temperature danger zone) during preparation must be kept to a minimum (this also includes batter mixes etc).
- When not in use, potentially hazardous food and ingredients must be kept at 5°C or below.

### What if there is a problem?

You must throw away any ready-to-eat food that has been contaminated and change any practices and/or retrain staff where necessary.

#### Glass breakage

If a glass object or window breaks in the kitchen you must:

- clean up the broken glass immediately;
- throw away any uncovered food in the surrounding area;
- check the area carefully for glass;
- dispose of glass fragments in an outside rubbish bin (not the kitchen).



Never use the same equipment or utensils (e.g. knives, plates, containers etc) for raw and ready-to-eat foods – unless they have been thoroughly cleaned, sanitised and dried between tasks.

Dehydrated products – Once milk or water is added to products such as potato flakes/granules, custard powder etc they should be used immediately, or either kept chilled (at or below 5°C) or hot (at or above 60°C).

## Write it down

Write down in the Diary what action you have taken if food has not been prepared correctly.



Break eggs into a clean container before adding to other ingredients. This will prevent the possibility of the ingredients becoming contaminated by pieces of broken egg shell.

# Cooking poultry

## Goal

To ensure that poultry (including liver) and dishes containing poultry are thoroughly cooked to the centre.

Act requirements:

- Food must be produced or processed and handled in a way that minimises the contamination or deterioration of the food;
- There must be procedures for controlling hazards at each processing and handling step where it is essential to eliminate or reduce a hazard to an acceptable level
- Food must be safe and suitable.

## How this is done

- Poultry and poultry products must be thoroughly defrosted before cooking (unless otherwise directed by the manufacturer's instructions).
- The oven must be pre-heated before cooking starts.
- Poultry (including liver) must be cooked so that the centre of the thickest part either exceeds 75°C or reaches one of the temperature/time combinations below.

Internal temperature	Time
65°C	for 15 minutes
70°C	for 3 minutes
75°C	for 30 seconds

## Checking poultry is cooked

A temperature probe must be used to check that the thickest part of the meat (usually the breast or the innermost part of the thigh) has reached at least 75°C or one of the time and temperature combinations above. This is done in one of the following ways:

- the temperature is measured each time the poultry item is cooked; or
- one item in the batch is temperature probed each time a batch of the same poultry item is cooked; or
- one dish is temperature probed each week when a standard (proven) cooking procedure is followed, – see *Proving that a time/temperature setting cooks poultry*.



*It is not necessary to temperature probe diced or thinly sliced poultry (such as in a stirfry). This is because smaller pieces are more likely to cook through to the middle more easily and it's difficult to get a representative reading.*

When using a temperature probe, follow the procedure *Checking temperatures*.



## Why?

Thoroughly cooking poultry will kill the harmful microbes such as *campylobacter* and *salmonella* that can make customers ill.

## What if there is a problem?

If poultry does not reach a high enough temperature, you must keep cooking until it does!

When poultry that is being cooked using a standard time/temperature setting is found not to have been cooked properly, you must take action to find out why. Here are examples of questions to ask.

- Was the procedure followed correctly?
- Does the equipment (e.g. oven) need repairing?
- Have the recipe ingredients changed (different cuts of meat)?

## Write it down

You must write down in the **Checking poultry is cooked** table each of the poultry dishes that are served and select which option will be used to check that they are thoroughly cooked.

### Standard time/temperature setting

When a standard time/temperature setting is being used, you must write down the checks that have been made to prove that the time/temperature setting will either:

- cook the food to at least 75°C; or
- cook the food for the correct length of time at the temperature determined (e.g. for 15 minutes at the internal temperature of 65°C) see *Proving that a time/temperature setting cooks poultry* procedure.

For poultry items that are cooked using a standard time/temperature setting, you must check the temperature of the poultry in one dish every week. Write this down in the **Once a week poultry temperature checks** record in the Diary.

### Poultry dishes with no standard time/temperature setting

For poultry dishes that aren't cooked using an established standard time/temperature setting, you must write down the temperature of each poultry item or one item from a batch in the **Cooking poultry temperature** record. This must be done every time the food is cooked.

You must write down in the Diary any action taken if food doesn't reach a safe temperature.



**Poultry is always cooked thoroughly and is never served medium or rare.**



# Proving that a time/temperature cooks poultry

This is what you must do if you regularly cook a poultry item or poultry dish and don't want to check its temperature each time you cook it. You will need to use the same equipment and same standard ingredients (type, weight, size etc) each time you cook the item or dish. The following process will enable you to demonstrate that a standard cooking procedure (such as a particular temperature for a set time) properly cooks the poultry item.

Act requirements:

- Food must be produced or processed and handled in a way that minimises the contamination or deterioration of the food;
- There must be procedures for controlling hazards at each processing and handling step where it is essential to eliminate or reduce a hazard to an acceptable level;
- Food must be safe and suitable.

1. You must cook the food using the standard cooking procedure.
2. You must check the thickest part of the poultry item with a probe thermometer to ensure it has either reached more than 75°C or one of the time/temperature combinations from the table below.

Internal temperature	Time
65°C	for 15 minutes
70°C	for 3 minutes
75°C	for 30 seconds

3. You must repeat the standard cooking method in steps 1 and 2 on at least three separate occasions until you are confident a safe temperature will be consistently reached.

If the food does not reach a safe temperature on three occasions, you will need to increase the cooking time and/or cooking temperature and repeat steps 1 to 3 above.

4. You must write down the results of your time/temperature checks below.

<b>Poultry item</b> ( <i>type, size and weight</i> ):							
<b>Select the temperature the poultry item will be cooked to:</b> [tick as appropriate]							
<input type="checkbox"/> Cooked to higher than 75°C				<input type="checkbox"/> Cooked at <input type="text"/> °C for <input type="text"/> minutes			
<b>Cooking details</b>							
Method (How was the food cooked?) What equipment was used?	Date	Time started cooking	1st probe*		2nd probe		<b>Initials</b>
			time	temp	time	temp	
	1st						
	2nd						
	3rd						

\* If the temperature is higher than 75°C, it isn't necessary to probe a second time.

<b>Poultry item</b> ( <i>type, size and weight</i> ):							
<b>Select the temperature the poultry item will be cooked to:</b> [tick as appropriate]							
<input type="checkbox"/> Cooked to higher than 75°C				<input type="checkbox"/> Cooked at <input type="text"/> °C for <input type="text"/> minutes			
<b>Cooking details</b>							
Method (How was the food cooked?) What equipment was used?	Date	Time started cooking	1st probe*		2nd probe		Initials
			time	temp	time	temp	
	1st						
	2nd						
	3rd						

\* If the temperature is higher than 75°C, it isn't necessary to probe a second time.

# Proving that a time/temperature cooks poultry (continued)

**Poultry item** (*type, size and weight*):

Select the temperature the poultry item will be cooked to: [tick as appropriate]

Cooked to higher than 75°C  Cooked at \_\_\_\_\_ °C for \_\_\_\_\_ minutes

**Cooking details**

Method (How was the food cooked?) What equipment was used? What temperature setting was used?	Date	Time started cooking	1st probe*		2nd probe		Initials
			time	temp	time	temp	
	1st						
	2nd						
	3rd						

\* If the temperature is higher than 75°C, it isn't necessary to probe a second time.

**Poultry item** (*type, size and weight*):

Select the temperature the poultry item will be cooked to: [tick as appropriate]

Cooked to higher than 75°C  Cooked at \_\_\_\_\_ °C for \_\_\_\_\_ minutes

**Cooking details**

Method (How was the food cooked?) What equipment was used?	Date	Time started cooking	1st probe*		2nd probe		Initials
			time	temp	time	temp	
	1st						
	2nd						
	3rd						

\* If the temperature is higher than 75°C, it isn't necessary to probe a second time.

**Poultry item** (*type, size and weight*):

Select the temperature the poultry item will be cooked to: [tick as appropriate]

Cooked to higher than 75°C  Cooked at \_\_\_\_\_ °C for \_\_\_\_\_ minutes

**Cooking details**

Method (How was the food cooked?) What equipment was used? What temperature setting was used?	Date	Time started cooking	1st probe*		2nd probe		Initials
			time	temp	time	temp	
	1st						
	2nd						
	3rd						

\* If the temperature is higher than 75°C, it isn't necessary to probe a second time.



# Checking poultry is cooked

All poultry and dishes containing poultry must be thoroughly cooked. The table below identifies what checks you must carry out for each poultry item or dish to ensure that it is properly cooked.

The Act requires that:

- Food must be produced or processed and handled in a way that minimises the contamination or deterioration of the food.
- There must be procedures for controlling hazards at each processing and handling step where it is essential to eliminate or reduce a hazard to an acceptable level.
- Food must be safe and suitable.

## Write it down

Use the table below to identify and record which checks are used to make sure each poultry dish you serve is properly cooked.

**Step 1 – in column A write down all the poultry dishes that you cook that need checking.** Copy the table or add further rows if necessary.

**Step 2 – in column E tick a box to show the temperature (and time) the dish will be cooked to.** This will either be an instant temperature above 75°C or one of the temperature/time combinations below.

**Step 3 – in columns B to D identify how you check that each dish is properly cooked.**

- If you temperature probe the dish every time it is cooked, tick the box in **column B**. Each time you cook this dish, you must write the temperature it has been cooked to on the *Cooking poultry temperature record*.
- If you cook a number of the same dishes together (batch cook) and temperature probe one dish in each batch, tick the box in **column C**. Each time you cook a batch of this dish, write the temperature of the probed item on the *Cooking poultry temperature record*.
- If you have a proven time/cooking setting for the dish (you have completed the *Proving that a time/temperature setting cooks poultry procedure* for the dish), tick the box in **column D**. Each week, the temperature of one dish cooked from **column D** must be checked. You must write this temperature in the space that is provided each week in the Diary. If you have ticked **column D** for more than one dish, you will need to choose a different dish to check each week to ensure all dishes consistently meet the proven procedure.

Internal temperature	Time
65°C	for 15 minutes
70°C	for 3 minutes
75°C	for 30 seconds

A Poultry item (list each dish)	Temperature probe (tick as appropriate)			E Temperature poultry dish must reach in thickest part (tick as appropriate)
	B Every dish, every time	C One dish in every batch	D One dish once a week	
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins



# Cooking

## Goal

To ensure food is properly cooked.

Act requirements:

- Food is produced or processed and handled in a way that minimises the contamination or deterioration of the food.
- There must be procedures for controlling hazards at each processing and handling step where it is essential to eliminate or reduce a hazard to an acceptable level.
- Food must be safe and suitable.

## How this is done

Processed meat, such as rolled joints, tenderised or injected meats, minced meats and meat products (e.g. sausages, burgers) and livers, must be thoroughly cooked because microbial contamination can be throughout the meat.

### Poultry

See *Cooking poultry*.

### Processed meat

Follow the manufacturer's cooking instructions, if any.

- Processed meat products are checked that they are steaming hot through to the centre with no red or pink meat remaining.
- Rolled joints are checked by inserting a skewer into the centre until juices run out. Juices must show no pink or red when properly cooked.

### Whole cuts and whole joints of meat

The surface of the meat is thoroughly sealed to kill the microbes present.



*Whole cuts and whole joints of meat can be cooked to preference and can be served rare, if properly sealed (any contamination will only be on the outside surface of the meat).*

### Livers

Livers and liver patés are thoroughly cooked – see *Cooking poultry*. There is guidance on the safe cooking of livers at [www.mpi.govt.nz](http://www.mpi.govt.nz)

### Liquid dishes (e.g. soups, sauces, gravies)

- Cold spots must be avoided by stirring frequently so that an even temperature is reached throughout.
- Dishes must be brought to a simmer.

### Shellfish

- Look for change in colour and texture. Prawns will turn from blue-grey to pink and scallops become milky white and firm when cooked.
- Any mussel or clam with an open or damaged shell must be thrown out before cooking as it may not be safe to eat.
- To check that a mussel or clam is cooked, make sure the shell is open and that the mussel or clam has shrunk inside the shell. If the shell has not opened during cooking, you must throw it away.

## Why?

- Harmful microbes are present in many foods. Cooking (and reheating) can kill harmful microbes.
- Microbes are invisible to the human eye and cannot be physically removed from food.

## How this is done

### Customer self-cook

The following steps must be taken when food is provided for customers to cook their own meals (e.g. hot stone, steamboat, hotpot, grill, barbeque etc).

- Sufficient and appropriate utensils and tableware must be provided to enable customers to avoid cross-contamination.
- Cooking equipment (e.g. hot stone, grill etc) provided must be capable of cooking food safely.

## What if there is a problem?

If food isn't cooked thoroughly you must consider:

- cooking the food for longer; and
- looking at recipes and change cooking times and/or temperatures; and
- dividing the food into smaller quantities when cooking; and
- using different equipment; and
- retraining staff as necessary.

## Write it down

If food does not cook properly when following set recipes and procedures, record in the Diary:

- what you did with the food that was not cooked properly; and
- what action was taken to prevent this happening again.



**Tasting dishes** – When tasting food, always use a clean spoon or utensil each time. Don't put any food left from the tasting back into the dish.

**Helpful information** – Customers may be given appropriate instructions on how to cook and handle the food safely.



# Hot holding prepared food

## Goal

To reduce the time that prepared ready-to-eat food is held in the temperature danger zone (5°C to 60°C).

Act requirements:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food.
- There must be procedures for controlling hazards at each processing and handling step where it is essential to eliminate or reduce a hazard to an acceptable level.

## Why?

- Food in the temperature danger zone (5°C to 60°C) will encourage harmful microbes to grow rapidly.

## How this is done

You must always reheat food first before putting it in a bain-marie or hot cabinet – neither are able to thoroughly reheat food.

### Hot holding

The *Reheating prepared food* procedure is followed when food is to be reheated before being hot held.

- Equipment such as bains-marie and warming cabinets must be cleaned and preheated before food is put into them.
- Bains-marie must not be overloaded.
- Food must be held at 60°C or hotter.
- Food is stirred to make sure it's kept hot right through.
- Existing batches of food must not be topped up with new batches.

You must use a probe thermometer to check the temperature of food that has been hot held for two hours – see *Checking temperatures*.



Use a probe thermometer to check the temperature of food that has been hot held for two hours – see *Checking temperatures*.

## What if there is a problem?

If hot food has been held at a temperature between 21°C and 60°C for more than two hours, it must be thrown away.

If hot food has been held at a temperature below 60°C for less than two hours, it can either be:

- thoroughly reheated and served hot (above 60°C); or
- cooled to below 5°C within four hours and kept at this temperature until it is eaten.

## Write it down

You must write down in the hot-held food record:

- the temperature of foods that have been hot-held for two hours.
- any problems that you have had in hot-holding food at an internal temperature of 60°C or above and what action you took.

Make a note in the Diary of any items that you have had to throw away, and why.

Also write down any matters that might need following up (e.g. maintenance, training, review cleaning schedule etc).





# Cooling hot prepared food

## Goal

To cool hot, ready-to-eat food quickly to minimise the length of time it spends in the temperature danger zone.

Act requirements:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food.
- There must be procedures for controlling hazards at each processing and handling step where it is essential to eliminate or reduce a hazard to an acceptable level.
- Food must be safe and suitable.

## Why?

- Food in the temperature danger zone (5°C to 60°C) will encourage harmful microbes to grow rapidly.

## How this is done

### You must cool hot foods quickly

Potentially hazardous food must be cooled:

- from 60°C to 21°C within two hours; and
- from 21°C to below 5°C within another four hours (maximum time between 60°C and 5°C = six hours).

Cooked potentially hazardous food must be protected from contamination during cooling. See *Potentially hazardous foods*.

### Methods for chilling hot food dishes

1. Use a blast chiller.
2. Put the food into a tray or larger dish (preferably metal) to increase its surface area.
3. Divide food into smaller portions.
4. Place on a rack to improve air circulation around the food.
5. Move hot food to a colder area.
6. Place vacuum packed foods into iced water.
7. Stand pans of hot food in cold or iced water.
8. Stir hot liquid as it is chilling.
9. Use the “cool setting” on the oven (the oven must be cool first!).
10. Place the food in the chiller once it has cooled to 21°C.

**You must regularly check that food has cooled within the required time frame by using a probe thermometer – see *Checking temperatures*.**



## What if there is a problem?

If hot prepared food has not been cooled from 60°C to 21°C in two hours and then from 21°C to below 5°C in a further four hours (total of six hours maximum) it must be thrown away.

You will need to try out alternative cooling methods to find one that will cool food to 5°C or below within the required time.

## Write it down

Once a week, you must write down in the Diary the temperature check made on one potentially hazardous item or dish that has been cooled down.

You must also write down any problems that you have had in cooling food to below 5°C in the required time and what action you took and any items you have had to throw away. You will need to include any matters that might need following up (e.g. training, cooling method etc).



# Reheating prepared food

## Goal

To reheat food quickly and thoroughly.

To reduce the amount of time potentially hazardous food is held in the temperature danger zone (5°C to 60°C).

The Act requires:

- Food must be safe and suitable.

## Why?

- Microbes can survive in food that is not thoroughly reheated to the centre.
- Food in the temperature danger zone (5°C to 60°C) will encourage harmful microbes to grow rapidly.

## How this is done

### Reheat food well

- Manufacturer's instructions (if any) must be followed for reheating food.
- Equipment that reheats food effectively must be used.
- Bains-marie and warming cabinets must not be used to reheat food, because they can't reheat food quickly enough.

The following methods must be used to reheat food: [tick as appropriate]

- microwave (note: observe standing times)
- oven
- pot/pan/wok etc.

- Where possible, stir or mix foods to make sure there are no cold spots and the food is evenly reheated.
- When reheating potentially hazardous foods, a thermometer must be used to check that it reaches an internal temperature of 75°C or more in all parts.
- Food must be checked to ensure that it has been reheated properly by using the same checks as when cooking (see Cooking).
- Reheated food must be served quickly or kept at 60°C or hotter.
- See *Potentially hazardous foods*.

### Use of plastics in microwave ovens



- *Avoid direct contact of plastic film with food when using it to reheat food. Clean, white absorbent kitchen paper may be a preferable alternative to prevent spatter.*
- *Only use plastic containers designed for use in the microwave. Other containers may seem okay but may not have been tested for use at high temperatures (e.g. ice cream containers, which are not designed to be exposed to high temperatures).*
- *As chemical migration is more likely to occur into hot fatty foods, glass containers are a suitable choice for heating these products.*

## What if there is a problem?

If the food does not reheat sufficiently increase the temperature and/or reheating time.

Retrain staff as necessary.

## Write it down

Once a week you must write down in the Diary the temperature of one food item that has been reheated.

You must write down any problems that you have had in reheating food and what action you took.



# Display and self service

## Goal

To display and serve food in a manner that minimises the risk of contamination and the growth of harmful microbes.

To reduce the amount of time prepared potentially hazardous food is held in the temperature danger zone (5°C to 60°C).

The Act requires:

- Food must be safe and suitable
- Food must be processed and handled in ways that minimise the contamination or deterioration of food.

## Why?

- Food in the temperature danger zone (5°C to 60°C) will encourage harmful microbes to grow rapidly.
- Poor arrangement of food can lead to contamination when customers reach across displays.
- Self-service displays present a high risk because many people have access to the food.

## How this is done

### Hot food

When reheating food:

- the instructions in the *Reheating prepared food* procedure must be followed;
- the instructions in the *Hot holding prepared food* procedure must be followed.

### Chilled food

- Ready-to-eat potentially hazardous foods must be: [tick method used]
  - held at 5°C or below
  - displayed unrefrigerated for no longer than four hours.
- The time ready-to-eat food is left on display above 5°C is indicated by: [tick method used]

time written on stickers stuck on wrapping or next to the food

coloured stickers that can be matched to the time food was put on display stuck on wrapping or next to the food

other \_\_\_\_\_.

### Display and serving

- Food must be put out for display or service as soon as possible after preparation.
- Clean serving utensils must be provided for each food item or dish, and handles do not touch the food.
- Food must be protected from contamination by the use of: [tick method used]

sneeze guards

covers over food

other \_\_\_\_\_.

- When unwrapped displays (e.g. self-service salads, hot foods etc) need more food they must be replaced with completely new batches of food rather than the previous batch being “topped-up”.
- Left-over self-service food must not be reused (e.g. it is not carried over to the next day for use).
- Serving spoons must be replaced whenever they have become contaminated – e.g. dropped on the floor or misused – e.g. food is on handles.
- Single-use items must be thrown away after use (e.g. paper plates, cups, plastic cutlery etc).
- Self-service displays must be appropriately supervised.

## What if there is a problem?

You must replace food and/or serving utensils that could have become contaminated through poor food-handling practices or misuse.

You must throw away any food that may have been contaminated by customers or others.

### Hot food

If hot food has been held at between 21°C and 60°C for more than two hours, it must be thrown away.

If hot food has been held at a temperature below 60°C for less than two hours, it must either be:

- thoroughly reheated and served hot (above 60°C); or
- cooled to below 5°C within four hours – see *Cooling hot prepared food*.

### Chilled food

Ready-to-eat potentially hazardous food that has been held at temperatures between 5°C and 60°C:

- for a total of less than two hours must be refrigerated or used immediately; or
- for a total of between two and four hours must be used immediately; or
- for a total of four hours or longer must be thrown out.

## Write it down

You must write down in the Diary any problems that you've had keeping food at the correct temperature and what action you took to fix it.

You must make a note in the Diary of any items that you have had to throw away, and why.

Also write down any matters that need follow up (e.g. training, review cleaning schedule etc.).



# Displaying food for retail sale

## Goal

To display all retail food for customer self-selection safely and appropriately.

The Act requires:

- Food must be safe and suitable
- Food must be processed and handled in ways that minimise the contamination or deterioration of food.

## Why?

- Potentially hazardous food in the temperature danger zone (5°C to 60°C) can allow harmful microbes to grow.
- Food that is sold after its “use-by” date could result in consumers becoming ill.
- Food that is not displayed properly could become contaminated.

## How this is done

### Food on display

- Ready-to-eat food on display must be wrapped or covered to protect it from contamination (e.g. self serve from a closed cabinet).
- Potentially hazardous food must be displayed under temperature control.
- Pre-packaged food must be displayed in accordance with any manufacturer or supplier’s storage instructions.
- Raw foods must be stored so they can’t contaminate cooked or ready-to-eat foods.
- Repackaged bulk food must be correctly labelled for retail sale. See the Code: Standard 1.2.1.
- Food in packaging must be thrown away if its wrapping has been damaged to the extent that the food is exposed, or no longer contained in, the wrapping.
- Food cans that are bulging, corroded or damaged must be thrown away or returned to the supplier.

### Stock rotation

- A “first in first out” policy for displayed food must be used. Old stock must be displayed so that it is used or sold first; new stock is placed behind old stock.
- “Use-by” dates must be checked daily. Food dated that day must be used or thrown away at the end of the trading day.
- Food that has reached its “best-before” date must be removed from display or sold clearly marked as past its “best-before” date provided it is safe and suitable.

See also:

- *Purchasing and receiving goods;*
- *Storage;*
- *Hot holding prepared food;*
- *Display and self service;*
- *Food labelling.*

## What if there is a problem?

If food is displayed past its “use-by” dates, identify why and review staff training; check incoming goods and food storage as needed.

If chilled food is above 5°C, or frozen food has thawed, follow actions in the “What if there is a problem?” section in *Chilled and frozen food storage*.

If packaging has been damaged, identify why and review staff training, handling activities and incoming goods checks as needed.

## Write it down

You must write down in the Diary any problem that you had with retail food and what action you took to fix it.



**Tips for increasing the effectiveness of a chilled/frozen food display cabinet to keep food cold (and reducing running costs). See also Design and use of food premises and Maintenance sections).**

- Use display cabinets with doors, plastic curtains or other ways of containing cold air. Open display cabinets have to work harder to keep food chilled.
- Keep the temperature of the retail area cool, so the display cabinet motors will not have to work as hard to keep food cool.
- Situate open display cabinets away from strong drafts as they remove cold air from the unit, affect the temperature of food and make the motor work harder.
- Keep air vents clear of stock. This will help the unit operate as intended by the manufacturer.
- Display food within the load lines. This will help keep it at the intended temperature and prevent food wastage.
- Keep door seals free from ice build-up and defrost regularly. This will stop cold air leaking out and mean the motor does not have to work as hard.
- Regularly clean dust from heat exchange and motor surfaces to help display cabinets run more effectively.



# Off-site catering

## Goal

To ensure that off-site events are properly resourced and organised in advance.

The Act requires:

- Food must be safe and suitable
- Food must be handled in ways that minimise the contamination or deterioration of food and prevents food from containing any biological or chemical agents or other substance that would be unexpected and unreasonable in food.

## Why?

- The lack of appropriate off-site facilities may result in food becoming contaminated.

## How this is done

### Pre-event check

Before each off-site catering event, the extent of the food preparation and handling activities to be undertaken off site must be determined and relevant procedures and record-keeping requirements of this plan identified.

Make the following checks:

- What facilities will be available at the venue or site for:
  - food storage (including chilled and frozen food);
  - preparation;
  - cooking;
  - changing areas for staff;
  - toilets;
  - hand washing;
  - cleaning equipment etc.
- What services are on-site:
  - water;
  - electricity (if needed);
  - solid and liquid waste disposal.
- When appropriate facilities or services are not available off site, arrangements must be made to provide them. If this is not possible, and an alternative venue is not an option, catering must not be provided for the event.

All of the procedures in this FCP continue to apply and must be followed when catering off-site.

### Staffing

- Sufficient staff must be available, and casual staff must be appropriately trained and supervised.

### Transportation

- Sufficient and appropriate food transport must be available – see *Transporting food*.
- Equipment, utensils and food supplies etc. must be checked on arrival at the off-site venue to ensure that they are still appropriate to use – see *Purchasing and receiving goods*.

## What if there is a problem?

You must throw away any ready-to-eat food that becomes contaminated.

You must throw away potentially hazardous food that has been kept between 5°C and 60°C for longer than four hours.

If there has been an equipment breakdown or failure, you must make arrangements to replace or repair equipment. Review the adequacy of the maintenance schedule and make changes as appropriate.

## Write it down

You must use the Off-site catering pre-event checklist to record what arrangements are needed.

You must follow the record-keeping requirements in the procedures relevant to the event such as Transporting food, Reheating prepared food, Display and self-service, Hot holding prepared food etc.



# Sushi

## Goal

To make acidified sushi rice (that has a pH of 4.6 or below)

To make sure that non-acidified sushi is stored for no more than 4 hours above 5°C

To enable sushi rice and sushi to be held at temperatures between 5°C and 15°C for a period of up to eight hours for nigiri pieces, and up to 12 hours for noris.

The Act requires:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food.
- There must be procedures in place that prevent, eliminate or reduce hazards during the production, processing and handling of food.
- Food must be safe and suitable.

## Why?

- Adding vinegar solution to rice makes the rice acidic
- Harmful microbes cannot grow well in acidic food (pH 4.6 or below).

## How this is done

This procedure provides for requirements for the safe preparation of sushi (nigiri pieces and nori rolls) using sushi rice.

It does not replace the need to follow other relevant procedures in the Food Control Plan e.g. *Displaying and self service*.

### Sushi Rice (not acidified)

- This procedure includes sushi made with brown rice\*.
- If not being acidified cooked rice must be cooled from 60°C to 21°C within 2 hours and to 5°C within another 4 hours.
- Once assembled Sushi and Onigiri made with non-acidified rice must not be kept above 5°C for more than 4 hours – see *Display and self service*.

\*Note: Brown rice cannot be acidified effectively because of the hard surface coating on the grain which limits penetration of acid solutions.

### Sushi Rice (acidified)

- This procedure does not cover sushi made with brown rice.
- The pH of the sushi rice must be at a pH of 4.6 or lower. To do this a vinegar solution must be added to the rice as soon as it is cooked.
- To measure the pH, mix one part clean water with three parts acidified rice (e.g. ¼ cup of clean water mixed with ¾ cup acidified rice). pH is measured using:
  - pH strip
  - pH paper
  - calibrated pH meter

When you have an established procedure test its accuracy with the next 3 batches. If you can demonstrate that you are consistently getting a pH of 4.6 or below then you only need to check the pH of a batch every two weeks.

- Acidified rice must be cooled from 60°C to 21°C within 2 hours, and to 15°C or less within another 4 hours.
- You must store acidified rice between 5°C - 15°C for no more than 8 hours after which it must be discarded.

## How this is done

- Acidified rice must be protected from contamination when not being used to make sushi.

Leftover rice must not be mixed with a newly prepared batch of rice.

### Preparing sushi

You must ensure all ingredients are clean and free from contamination:

- thoroughly wash fruit and vegetable ingredients before use;
- separate raw and ready-to-eat ingredients to minimise cross-contamination.
- All utensils used must be clean and if necessary sanitised.

### Display

#### Sushi made with acidified rice

##### Nigiri pieces

Nigiri pieces, including the acidified rice used to make them, must be stored between 5°C and 15°C for no more than a combined total of 8 hours after which they must be thrown away. For example:

- Nigiri pieces that are assembled straight after the rice has been acidified may be kept for no more than 8 hours at between 5°C and 15°C: or
- the acidified rice has been kept between 5°C and 15°C for 2 hours before the Nigiri pieces are assembled. Once assembled, the pieces may be kept for up to 6 hours between 5°C and 15°C.

##### Nori rolls

Nori rolls, including the acidified rice used to make them, must be stored between 5°C and 15°C for no more than a combined total of 12 hours after which they must be thrown away. For example:

- Nori rolls that are assembled straight after the rice has been acidified may be kept for no more than 12 hours at between 5°C and 15°C.
- If the acidified rice has been kept between 5°C and 15°C for 6 hours before nori rolls are assembled the nori rolls may be kept for up to 6 hours between 5°C and 15°C.



'Nigiri' is a piece of raw or cooked ingredient placed on top of sushi rice.

'Nori' is sushi rice, raw or cooked seafood, vegetables or other ingredients rolled in seaweed sheets.

'Onigiri' is sushi rice (not acidified) and shaped into a triangle or oval shape. Onigiri can be plain or contain a filling in the middle.

#### What if there is a problem?

If the pH of the rice is above 4.6, the volume of vinegar solution being added must be increased. You must then re-test the pH of the rice until the correct pH is reached.

Keep a note of the amount of vinegar solution required to achieve the correct pH in one kilogram of rice.

Make sure everyone who prepares the sushi rice knows the correct amount to use each time.

Re-train staff in correct food handling procedures if necessary.

You must throw away any sushi products, or their ingredients, that may have been contaminated through poor handling.

You must write down what you did in the daily page of the Diary.

## Write it down

Write down the procedure you've established to get a consistent pH of 4.6 or below.

Write down the pH of each batch in the Sushi Rice pH record the pH until it is clear you are getting a consistent result (6 batches)

Record your results every two weeks or more frequently if there are any problems.

# Chinese style roast duck

## Goal

To prepare Chinese style roast duck so that it can be safely held within the temperature danger zone (4°C to 60°C) for up to 22hrs. To reduce harmful microbes on the surface of the duck and their ability to grow or produce toxins.

The Act requirements:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food.
- There must be procedures in place that prevent, eliminate or reduce hazards during the production, processing and handling of food along with the criteria and reason for each criterion.
- Food must be safe and suitable.

## Why?

- Harmful microbes will grow rapidly at temperatures between 5°C to 60°C (the temperature danger zone).
- The boiling water will kill harmful microbes and the vinegar will help stop them from growing while the duck is hung to dry.
- Keeping the skin intact will prevent harmful microbes from getting onto, and growing on, the meat.

## How this is done

This procedure does not replace the need to follow other relevant procedures in the Food Control Plan.

### Preparation

- Frozen ducks must be thoroughly defrosted.
- The duck must be dipped in boiling water containing vinegar and other ingredients (as used in the recipe).
- The duck must be hung to dry in a cool area for no longer than six hours. (After six hours of hanging, the growth rate of microbes increases. Some microbes release toxins that will not be destroyed during roasting).
- At the start and half way through the drying process the internal temperature of the duck must be checked using a thermometer to make sure that internal temperature of the duck doesn't get any higher than 25°C throughout the drying process.

### Cooking

- The duck must be roasted (follow *Cooking poultry*).

### Display/storage

- After cooking, the duck must be carried using the hanging hook and must not be directly handled.
- Care must be taken to make sure the duck's skin remains intact and isn't broken during display and storage. This is because if harmful microbes get onto the duck's flesh, they will grow quickly.
- Ducks must be displayed or stored in a well ventilated area to prevent moisture build up (ie, not in an enclosed glass cabinet).
- Ducks must not touch each other or any other products on display or during storage.
- Ducks must not be on display at ambient conditions for any longer than 22 hours. (After 22 hours on display harmful microbes grow more quickly on the surface of the duck's skin).
- If you wrap the duck, you must ensure that it is on display for no more than 5 hours.

## What if there is a problem?

### Drying

You must:

- re-boil any water that's used to dip the ducks if the mixture has cooled down;
- move any ducks that have a core temperature higher than 25°C during the drying process to the chiller until the temperature drops below 25°C;
- throw away any ducks that have been hung to dry for a period longer than six hours.

### Display

If ducks are found to be touching each other or any other meats on display, you must move them away immediately.

If ducks have been in contact with each other for a long time, you must remove them from the display, cut them up, and reheat the meat to 75°C. Then either:

- keep the meat at or above 60°C until it's served; or
- cool the meat from 60°C to 21°C within two hours, and from 21°C to 5°C in the next four hours and store at or below 5°C.

When the duck's skin is broken or has been handled by someone, cut up the duck – you must keep it at or above 60°C until it's served.

You must remove and dispose of any ducks that have been on display for longer than 22 hours.

Record your actions in the daily page of the Diary.

## Write it down

You must write down in the drying record:

- the temperature of each duck at the time it was hung up to dry and the time that drying started (see Chinese style roast duck drying record).
- the temperature of the duck halfway through the drying process and what you did to bring it down if it was higher than 25°C.
- the time the duck was taken from the drying area to be cooked.



## Proving a drying method for Chinese style roast duck

This is what you can do if you regularly cook Chinese style roast duck and don't want to check its temperature each time during the drying process. You must use the same equipment and same standard ingredients (i.e. same size ducks, same ingredients) each time. The following process will enable you to demonstrate that the duck is dried safely.

1. Follow the Serve Safe Chinese style roast duck.
2. During the drying process, you must make sure that the internal temperature of the duck doesn't get any higher than 25°C. Move any ducks with an internal temperature of more than 25°C during the drying process to the chiller until the temperature drops below 25°C.
3. Repeat the drying and cooking methods in steps 1 and 2 on at least three separate occasions until you are confident a safe drying method will be able to achieve consistent temperatures.

If the duck does not reach the selected internal product temperature on three occasions, you must move the ducks with internal temperature of more than 25°C to the chiller until the temperature has dropped below 25°C.

The time the ducks can be held at ambient conditions is no more than 6 hours. It is cumulative – if the ducks were placed in refrigeration to drop the internal temperature, then the time they had already been hung to dry before being put into refrigeration must be added onto the time they are hung to dry again once they are removed from refrigeration.

4. Write down the results of your time/temperature checks below.

Food item:							
Drying details							
What equipment was used? What temperature setting was used (for the chiller and oven?)	Date	Time started drying	Core Temperature		Time taken from drying area for cooking	Action taken to correct drying if core temperature is greater than 25°C	Initials
			Start	Halfway			
	1						
	2						
	3						

Food item:							
Drying details							
What equipment was used? What temperature setting was used (for the chiller and oven?)	Date	Time started drying	Core Temperature		Time taken from drying area for cooking	Action taken to correct drying if core temperature is greater than 25°C	Initials
			Start	Halfway			
	1						
	2						
	3						



# Doner Kebab

## Goal

To prevent the raw meat used to make the doner kebab from contaminating cooked and ready-to-eat foods.

To cook the doner kebab thoroughly.

The Act requirements:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food.
- There must be procedures in place that prevent, eliminate or reduce hazards during the production, processing and handling of food.
- Food must be safe and suitable.

## Why?

- The raw doner kebab meat may contain harmful microbes that could contaminate ready-to-eat food.
- To ensure that harmful microbes are killed by cooking.

## How this is done

This procedure doesn't replace the need to follow other relevant procedures in the Food Control Plan.

### Preparing a kebab spit

- Only fresh meat from an approved supplier must be used.
- Meat must be kept chilled at or below 5°C until needed.
- Spits must be prepared away from areas where salads, dips, sauces and cooked food is kept.
- Thin cuts of meat must be used when forming the spit.
- Prepared spits must be protected against dirt and other contamination and kept chilled below 5°C until needed for cooking.
- Frozen spits must be defrosted in the fridge prior to cooking.
- The length of the formed block of meat must not be longer than the length of the burners.

### Cooking/Serving

Cooking of the doner kebab on the vertical grill must be started well before serving the first customers.

The outside of the doner kebab must be thoroughly cooked before thin slices of meat are shaved from the outside surface.

Shaved meat must be collected and must not be allowed to fall into the drip tray.

Once the doner kebab starts cooking the heating elements must be kept on and not turned down.

When minced meat spits are cooked from frozen, shaved meat must undergo further cooking on a griddle/hot plate prior to use.



**Best Practice** is a second cook step via a griddle/hot plate to further cook the shaved meat before it is placed in the pita bread. This is done because the meat may not have had time to properly cook through on the spit to kill harmful microbes.

## What if there is a problem?

Any shaved meat that has not been cooked thoroughly must be further cooked by using a hotplate or grill.

If the doner kebab has not been completely used at the end of service you must:

- throw it away; or
- carve off any part cooked meat from the skewer. Cook thin slices on the grill/hotplate. Cool the cooked shaved meat, cover it and store in the fridge. The next day it may be reheated and served to your first customers.

You must cool the raw meat that remains on the skewer to 21°C within two hours and to below 5°C within a further four hours.

## Write it down

You must write down in the diary what action you took if there was a problem.

Check whether the specific record keeping requirements contained in the following procedures apply (tick as appropriate):

- Cooking poultry
- Hot-holding prepared food
- Cooling hot prepared food
- Reheating prepared food



# Cooking using the sous vide technique

## Goal

To ensure food is safe to eat when prepared using the sous vide method.

The Act requires that:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food.
- There must be procedures in place that prevent, eliminate or reduce hazards during the production, processing and handling of food.
- Food must be safe and suitable.

## Why?

- Lower temperature cooking takes longer to kill harmful microbes and if the temperature is too low, harmful microbes will grow rather than be killed.
- Harmful microbes may survive and grow when using the sous vide cooking method if the internal food temperature and time combinations are not met.

## How this is done

Sous vide is a method of cooking vacuum packed food at precise (and often low) temperatures, often for long periods of time. To make sure that sous vide cooked food is safe to consume temperature control is **extremely important**.

The procedures in this template only apply to sous vide cooking of meat and poultry cuts. It does not cover whole birds (e.g. chicken or duck) because their shape and cavities prevent even cooking.

The procedures do not apply to cooking fish using the sous vide method or to sous vide cooking in a steam oven.

This procedure provides requirements for the safe preparation of food using the sous vide method. It doesn't replace the need to follow other relevant procedures in the Food Control Plan (FCP). Refer to *Additional food safety information for sous vide procedure* for further information and explanation about safe sous vide practices.

If you want to sous vide foods using different time/temperature combinations, or sous vide other foods or use equipment such as steam ovens you will need to develop a procedure that outlines your method and shows that your way is valid. You will need to have your procedure evaluated by a recognised evaluator, and register your plan as a custom food control plan.

### Preparation

- Ingredients must be handled hygienically.
- Equipment must be regularly maintained and cleaned and, where necessary, sanitised before use – see Maintenance and Cleaning.
- A vacuum sealer used for raw food must not be used for ready-to-eat foods, unless there is a cleaning and sanitation step in-between to minimise cross-contamination.
- Food must be prepared into serving portions of equal size, thickness and shape. If you are using your proven process the portions sizes must be no bigger than the size you've specified in your process.
- Food must be vacuum packed in sous vide specific vacuum packs and there must be no creases in the vacuum-sealed pack.
- Resealable sandwich bags must not be used.
- The vacuum-sealed food prepared for sous vide cooking must be refrigerated at 5°C or lower if not put in the water bath immediately.

## How this is done

### Setting up the water bath

- Cooking equipment must have adequate heating capacity for the intended volume of food, and accurate and consistent temperature control.
- The water bath must be pre-heated to a temperature that will ensure the food reaches the desired cooking temperature as rapidly as possible.
- Vacuum-sealed food must be completely submerged in the water bath and packs must be evenly distributed to allow for good water circulation.
- There must be good water circulation in the water bath.
- Chilled foods must not be added to the water bath part way through a cook, as this will cause the water bath temperature to lower.
- You must change the water in the water bath every time you cook sous vide.



*We recommend you set your water bath temperature a few degrees higher than the internal product temperature you wish to achieve*

### Cooking

- The water bath temperature must be monitored and recorded regularly during cooking and must be measured with a calibrated thermometer. Take temperature readings at various spots in the water bath to confirm that it is at or above the specified temperature.
- If cooking at the lower temperatures, it is particularly important that the water bath temperature does not drop below 55°C for red meat and 60°C for poultry at any time. If using a proven method it should not drop below the specified temperature.
- You must check that the centre of the thickest part of the food has reached the selected internal food temperature prior to the start of holding time. It must take no longer than 4 hours to reach the selected internal temperature.
- When checking the internal temperature of the food, the vacuum seal must not be broken and you must follow hygienic practices. See *Additional food safety information for sous vide procedure* and *Checking temperatures*.
- For every batch of food, the internal temperature of the food must be measured at the start and end of the cook and on a regular basis during the cook, unless you are following a proven cooking method

## How this is done

- If you are following a proven cooking method measure the water bath temperature and time according to the proven process. Check the accuracy of your proven method by measuring the internal temperature at the centre of the thickest part of the food from the pack that is the slowest to heat (e.g. the thickest piece of meat located at the slowest heating point in the water bath). See *Proving a cooking method for sous vide*
- Once the centre of the thickest part of the food has met the internal food temperature chosen from the table, it must be held for the holding time corresponding to the chosen internal food temperature in the *Internal Temperature and Holding Times* table.
- You must make sure that the internal food temperature does not drop below the lowest temperature in the table at any stage during the holding time of your cook. That is 55°C for red meats for *Cook-Serve*, 60°C for poultry for *Cook-Serve* and 60°C for any *Cook-Chill* foods.
- When cooking sous vide the vacuum packed bags must be kept below the water surface.
- If you are using a proven process and there are any problems or changes (e.g. to the food, equipment or cooking times and temperatures), you will need to repeat the process of proving your time and temperature combinations



The **internal product temperature** is the minimum that must be achieved and maintained for at least the corresponding time at the slowest heating point of the largest product (this will be determined based on the products shape and size).

### Holding time and internal temperature combinations

- 1. Cook-Serve** time and temperature combinations are designed to achieve a 6 log<sub>10</sub> reduction in the concentration of Salmonella and must only be applied to foods that are:
- served immediately after sous vide cooking; or
  - cooled quickly to 5°C or less after sous vide cooking, stored and used within 2 days.

When using the Cook-Serve time and temperature combination:

- Red meat products must be held at a water bath temperature of 55°C or higher during the holding time.
- Poultry products must be held at a water bath temperature of 60°C or higher during the holding time.

- 2. Cook-Chill** time and temperature combinations are designed to achieve a 6 log<sub>10</sub> reduction in the concentration of Listeria monocytogenes and must only be applied to foods that:

- are served immediately after sous vide cooking; or
- are cooled quickly to 5°C or less after sous vide cooking, stored and used within 5 days.

When using the Cook-Chill time and temperature combination red meats and poultry must be held at a water bath temperature of 60°C or higher during the holding time.

## How this is done

### Internal temperature and holding times

Internal food temp °C	Cook-Serve: Serve immediately or within 2 days of cooking.		Cook-Chill: Serve immediately or within 5 days of cooking.	
	All meats except poultry Time (mins/hours)	Poultry Time (mins)	Red meat and poultry Time (mins/hours)	
TEMPERATURE DANGER ZONE*	55	420 mins / 7 hrs	Poultry must not be sous vide at temps lower than 60°C	If storing sous vide red meat or poultry for longer than 2 days do not cook at temperatures lower than 60°C
	56	296 mins / 4hrs 56 mins		
	57	208 mins / 3hrs 28mins		
	58	147 mins / 2hrs 27mins		
	59	104 mins / 1hr 44mins		
60	73 mins / 1hr 13mins	56 mins	91mins / 1hr 31mins	
61	52 mins	40 mins	63 mins / 1hr 3mins	
62	36 mins	29 mins	44 mins	
63	26 mins	21 mins	30 mins	
64	18 mins	15 mins	21 mins	
65	13 mins	11 mins	15 mins	
66	9 mins	8 mins	10 mins	
67	7 mins	6 mins	7 mins	

\*Minimum time once product has reached this temperature.

When food is removed from the water bath at the end of the holding time it must be:

- kept in its vacuum sealed packaging until it is ready to be used; and either
  - served immediately; or
  - taken from the bag and seared (or cooked in some other way) and served immediately; or
  - kept in the bag, cooled quickly and stored at 5°C or less for up to 2 days if using the Cook-Serve method; or
  - kept in the bag, cooled quickly and stored at 5°C or less for up to 5 days if using the Cook-Chill method.

### Cooling and storing sous vide food (*Cook-Serve* and *Cook-Chill*)

Once the food is cooked it must be cooled from 60°C to 21°C in two hours and then from 21°C to below 5°C in a further four hours.



If you don't have access to equipment such as a blast chiller you can quickly cool sous vide products using a slurry of half ice and half water. If the ice melts, add more.

See also - *Additional food safety information for sous vide procedure, Chilled and frozen food storage and Reheating prepared food.*



**Temperature Danger Zone:** Temperature control is **extremely important** if operating between 55°C and 60°C. Some harmful organisms can tolerate temperatures close to these and so can potentially survive if the temperature drops. Provided the procedure is followed this hazard should be managed.

**What if there is a problem?**

If a vacuum cannot be made (i.e. too much air in the vacuum bag), or the vacuum bag leaks

- check the vacuum machine to see if it is working properly; and
- that the vacuum bags do not have holes.

If the food is taking a long time to reach the selected internal food temperature, check for the following:

- The water bath is operating at the selected temperature.
- The water bath is not overfilled with water and/or food.
- There is good circulation of water after the food has been placed in the water bath; and
- The food is totally immersed.

If the internal food temperature drops during cooking, then the food must be cooked for the holding time in the table that corresponds to that lower temperature. For example, you are cooking poultry for immediate consumption at 62°C for 29 minutes. When you check the temperature at the end of the cook time it reads 60°C. You must now cook the food for another 27 minutes making a total cook time of 56 minutes.

If the food has not been cooked at the proven temperature, or has dropped below the minimum temperature in the table then you must discard it. For example poultry that is held below 60°C for any length of time during the holding time must be discarded.

If your sous vide food has not been cooled from 60°C to 21°C in two hours and then from 21°C to below 5°C in a further four hours (total of six hours maximum) it must be thrown away.

If there is a maintenance problem stop using the water bath and throw away any affected food. See *Maintenance*.

During chilled storage, if the vacuum-sealed bags bloat up, do not open the bag as this could indicate the presence of harmful bacteria and food spoilage. As other foods or surfaces could be contaminated by the harmful bacteria, these bags must be thrown away.

Write it down

You must write down in the Sous vide control sheet the checks made to confirm that food has been cooked, including:

- Water bath temperature just before the product is added to the water bath
- Time taken for the food to reach the selected internal product temperature (come up time)
- Length of holding time once food reaches the selected internal product temperature
- Internal temperature of the product at the start and end of holding time
- Time taken to cool the food

You must write down your actions when something went wrong with the cooking process (e.g. when the product was not up to temperature at the end of the holding time).  
holding time

You must write down your actions when something went wrong with the cooking process (e.g. when the product was not up to temperature at the end of the holding time).



# Proving a cooking method for sous vide

This is what you must do if you regularly cook meat and poultry dishes using the sous vide method and don't want to check the internal temperature each time you cook.

The Act requires that:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food.
- There must be procedures in place that prevent, eliminate or reduce hazards during the production, processing and handling of food.
- Food must be safe and suitable.

The following process will enable you to demonstrate that a standard sous vide cooking procedure will properly cook the food each time it is cooked.

You must use the same equipment (i.e. water bath filled with same amount of water), the same standard ingredients (type, weight, size, thickness etc) and the same number of packs in the water bath each time you sous vide. You must use a calibrated thermometer for your temperature checks.

1. Follow the *Cooking using the sous vide technique* pages.
2. Identify the key control points for your sous vide procedure.

This will include:

- the required water bath temperature when you put your food in,
- the selected internal food temperature. See Internal temperatures and holding times table.
- the length of time it will take your food to reach the required internal temperature after it's been put in the water bath (the come up time).
- the required holding time to safely cook your food once it has reached the selected internal temperature.

3. You must check the temperature of the thickest part of the food item with a probe thermometer to determine the time it has taken to reach the selected internal food temperature (the come up time), and ensure that the temperature is maintained for the respective holding time. The come up time must be less than 4 hours. Choose the food located at the slowest heating point of the water bath.

4. You must repeat the cooking method in steps 1 - 3 above for at least three separate batches. The come up time for your proven process will be the longest time recorded for the 3 batches. You need to be confident that the selected internal food temperature will always be met at the end of the come up time.

5. You must write down the results of each of your time and temperature checks in the *Proving a cooking method for sous vide* table.

6. If there any problems you will need to repeat the above process until you are again confident the required temperature will be consistently achieved.

7. If you change the size of the cut, or try a new type of meat you will need to follow the above steps to establish a new process.

8. Once you have established a proven method you must make sure you and/or any staff using the proven method follow it carefully. Each week you must check and record the time and temperature combinations for your proven method. You can use the Sous vide control sheet, your own control sheet or record system or a data logger.

If your weekly check finds that the water bath temperature is not being met, or the internal food temperature is not high enough at the start, during or at the end of the cook, then you must adjust your process. For example, cook at a higher temperature in the table, or cook for longer

If you don't want to check the revised time and temperature combination each time you cook you will need to follow the above steps to establish a new proven process.

If your weekly checks demonstrate that you have established a stable process you can decrease the frequency of your check to fortnightly.

Internal temperature and holding times			
Internal food temp °C	Cook-Serve: Serve immediately or within 2 days of cooking.		Cook-Chill: Serve immediately or within 5 days of cooking.
	All meats except poultry Time (mins/hours)	Poultry Time (mins)	Red meat and poultry Time (mins/hours)
TEMPERATURE DANGER ZONE*	55	420 mins / 7 hrs	Poultry must not be sous vide at temps lower than 60°C
	56	296 mins / 4hrs 56 mins	
	57	208 mins / 3hrs 28mins	
	58	147 mins / 2hrs 27mins	
	59	104 mins / 1hr 44mins	
60	73 mins / 1hr 13mins	56 mins	91mins / 1hr 31mins
61	52 mins	40 mins	63 mins / 1hr 3mins
62	36 mins	29 mins	44 mins
63	26 mins	21 mins	30 mins
64	18 mins	15 mins	21 mins
65	13 mins	11 mins	15 mins
66	9 mins	8 mins	10 mins
67	7 mins	6 mins	7 mins

\*Minimum time once product has reached this temperature.



# Additional food safety information for sous vide procedure

It is recommended that the food business follow this guidance to help them meet the sous vide procedure.

The guidance material includes recommendations for food businesses to follow to ensure food safety hazards are controlled. The guidance material should be used in conjunction with the Cooking using the sous vide technique.

## 1. Vacuum sealing

- To test the vacuum seal submerge the vacuum pack food in water. Air bubbles or bloated bags indicate air is present.
- Sous vide specific vacuum bags are single use, heat resistant and thaw resistant and thick enough to be resistant to punctures from bones and sharp food edges.
- Resealable sandwich bags cannot draw a vacuum so are unable to achieve good contact between the food and water bath, and they may not be as heat resistant, or thick enough to resist punctures from sharp edges.
- Creases in the vacuum-sealed bags can reduce heat transfer to the food and even heating.
- Once opened, do not reseal the vacuum bag. Exposing the food to air will introduce microbes which may affect the shelf life or safety of the food.

## 2. Preparation

- Making sure each vacuum bag contains foods of similar size and weight will achieve consistent cooking through a batch.

## 3. Water bath

- Do not overload the water bath, and if you have proven the process, make sure you don't add more packs than were used for proving the process.
- Good water circulation will prevent cold spots forming. This

can be done by using an automated stirrer for example. The cold spots can significantly lower the water temperature.

- Plates or wire racks can be used to keep vacuum packed bags below the surface.
- Place the largest vacuum packed bag in the coolest part of the water bath to monitor the temperature of the batch. Once that bag has been held for the required temperature and holding time, then the entire batch will have been cooked.
- If the water bath level drops during a cook and the vacuum sealed foods rise to the water surface, add warm water at a temperature that is not less than the set water bath temperature.

## 4. Temperature measurements

- The internal temperature of the food you are cooking is checked because you will not be able to tell from the look and feel of the food whether it has been thoroughly cooked.
- The internal temperature of the food can be measured by a needle temperature probe, inserted into a vacuum pouch through closed cell foam tape or thermocouple feed-through connector. Refer to insert below

## 5. Holding times and temperatures

- The holding times specified in the *Internal Temperature and Holding Times* table are the minimum holding time for the food. The food may be held longer if required.

## 6. Cleaning and maintenance

- The water bath can be cleaned with a water/vinegar solution at 71°C for 25 minutes as required.
- Routine maintenance will make sure that all components are in good working condition.



### How to measure the internal product temperature without breaking the vacuum seal

1. Place some closed cell foam tape on the thickest part of the vacuum sealed food product.
2. Insert the needle temperature probe into the closed foam tape until the tip has reached the middle of the food.
3. If the temperature reading is not at the required temperature, leave the probe in the food and place the food back into the water bath.
4. Check if any juices have leaked from the vacuum sealed bag. If there are signs of leakage you must remove the bag from the water bath.

## Developing your own sous vide procedure

If you want to cook sous vide in ways that aren't described in this procedure you can. You will need to develop a procedure that outlines your method and shows that your way is valid and have your procedure evaluated by a recognised evaluator. Refer to **Significant amendments** on the *Getting Started with the template* page.

If you do want to develop your own procedure you may find the following references helpful

- *Review of microbial pathogen inactivation relevant to sous vide cooking at temperatures below 55°C*. Aug 2016
- *Standardising D and Z values for cooking raw meat*. March 2017
- *Guidelines for restaurant sous vide cooking safety in British Columbia*. Jan 2016



# Catering for vulnerable people: Texture modified foods, nutritional supplements and shakes

## Serve Safe

### Goal

To make sure textured foods, nutritional supplements and shakes are prepared and stored safely and do not become contaminated by harmful microbes.

Act requirements:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food and prevent food containing substances that are unexpected or unreasonable.
- There must be procedures for controlling hazards at each production and processing and handling step where it is essential to eliminate or reduce a hazard to an acceptable level.
- Food must be safe and suitable.

### How this is done

Surfaces and equipment must be in sound condition and clean before use. See *Cleaning* and *Food allergens*.

Food must be prepared hygienically – See *Preventing cross contamination*

Good hand hygiene and personal hygiene practices must be followed when cooking food – See *Hand hygiene* and *Personal Hygiene*.

#### Texture Modified Foods

Texture modified meals are provided for people that have difficulty swallowing. These are foods that have been minced or pureed.

To ensure the texture modified food is safe you must use a separate processing area away from raw meats, fruits and vegetables (see *Cross contamination*).

#### Cooking

- Food must be cooked to temperatures of at least 70°C for 3 minutes or 75°C for 30 seconds.
- Food must be texture modified immediately after cooking using equipment that is only used with cooked food.
- Equipment used must have been cleaned and sanitised appropriately.

#### Service, storage and reheating

- Texture modified food must be served immediately after preparation or chilled rapidly to 5°C or below.
- You must not store chilled texture modified foods for any longer than 24 hours.
- Reheat texture modified foods to a core temperature of at least 75°C and use within one hour.

#### Nutritional supplements and shakes

The following steps must be followed to ensure that nutritional supplements and shakes are prepared safely:

- Nutritional supplements and milk shakes must be made in a [tick as appropriate]:

- dedicated preparation area; or
- shared preparation area that has been thoroughly cleaned and sanitised. (see *Cross contamination*)

### Why?

- Any harmful microbes present can grow rapidly.
- The process of texture modifying will decrease the temperature of the food making it ideal for any harmful microbes to grow.
- Extra handling after food has been cooked increases the chance of contamination.
- People on modified foods, supplements and shakes are especially vulnerable to harmful microbes.

### How this is done

- Nutritional supplements and shakes must be prepared just before service.
- If nutritional supplements have to be made in advance they must be stored below 5°C and thrown out if not used within 24 hours.
- Nutritional supplements must be made up from pre-boiled water chilled to 5°C or below.
- Any “left-overs” must be thrown away.



Staff hygiene, in particular hand hygiene, is extremely important in protecting supplements from contamination.

If texture modified foods, nutritional supplements and shakes are prepared in advance label them with the date and time prepared, description of food and discard date. This allows for easier identification, stock rotation and record keeping.

### What if there is a problem?

- If food does not reheat sufficiently increase temperature and/or reheating time.
- Report issues arising from processing and handling texture modified food to the nutrition manager
- If nutritional supplements or shakes are not made in accordance with this procedure they must be thrown out.
- Discuss what happened with the Nutrition Manager or Dietitian and ask how you can prevent it happening again. Retrain staff as necessary.

## Write it down

You must write down any problems you have:

- with processing and handling texture modified food.
- reheating food and what action you took.



## Catering for vulnerable people: Fresh produce (fruit and vegetables)

### Goal

To ensure hygienic handling and serving of fruit and vegetables.

Act requirements:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food.
- There must be procedures in place that prevent, eliminate or reduce hazards during the production, processing and handling of food.
- Food must be safe and suitable.

### Why?

- Raw fruit and vegetables may be contaminated with harmful microbes.
- Damage can allow harmful microbes to pass into produce
- Fresh produce may be contaminated by dirty hands, equipment and surfaces.
- Poor storage practices can damage produce or enable toxins to form that can make people ill.

### How this is done

- Good hand hygiene and personal hygiene practices must be followed.
- Rotate stock – “first in first out”.
- Fruits and vegetables must be thoroughly washed under running tap water before eating, cutting, or cooking. Even if the produce will be peeled, it should still be washed first. Scrub firm produce, such as melons with a clean produce brush.
- Prepacked salads must be stored according to manufacturer’s instructions.
- Store fruit and vegetables separately to uncooked meats and poultry, cooked foods and ready-to-eat foods.

See:

- *Hand hygiene*
- *Personal hygiene*
- *Purchasing and receiving goods*
- *Perishable and shelf stable food storage*
- *Chilled and frozen food storage*

### What if there is a problem?

- Throw out fruit and vegetables that are damaged, or are slimy, mouldy, etc.
- If equipment or preparation surfaces are not clean, thoroughly clean before using.
- If sanitising solution is not prepared to the correct strength, find out why and if necessary retrain staff.

## Write it down

You must write down in the Cleaning schedule the surfaces and equipment used and how/when they are cleaned (and/or sanitised); and by whom.

Write down any matters that need following up (e.g. training, review of cleaning schedule etc)

## Guidance

### Sanitising

If you have identified that sanitising raw fruit and vegetables is necessary you can either use the procedure below or an appropriate equivalent commercial preparation..

- Check produce is undamaged – damage prevents thorough sanitising.
- Before sanitising, chill produce - this stops water and harmful microbes from becoming drawn in to the produce.
- Pre-wash produce in water that is at least 10°C warmer than the produce and remove soil and dirt. The warmer temperature prevents water being sucked into the fruit or vegetables along with any bacteria present and contact with dirt reduces effectiveness.
- Soak produce in a sanitiser (such as a 100ppm concentration of bleach-water – see table) for 5 minutes or more – time is important to enable the active element in the sanitiser to work effectively.
- During soaking, agitate the produce to wet all surfaces.
- Don't rinse the produce (the final level of chlorine residue in the final product will not exceed limits set in the Australia New Zealand Food Standards Code at: <https://www.comlaw.gov.au>)
- Only prepare the sanitiser solution when it is needed, use it immediately then discard it. Don't store it.

### Addition of wetting agent

Chlorine sanitising solutions can be made more effective by adding a wetting agent (surfactant) such as Sodium lauryl sulphate.

### Making up a bleach-water solution

When making up the sanitiser solution it is **essential** that quantities are measured accurately.

Chlorine sanitiser solutions with 1% available (free) chlorine can be diluted following the table below to achieve a 100 ppm concentration of available chlorine.

Volume of water	Concentrated Chlorine (1%)	Wetting Agent (optional)
1 litre	10 mL	1 mL
5 litres	50 mL	3 mL
10 litres	100 mL	7 mL
50 litres	500 mL	35 mL

Chlorine sanitiser solutions with 3.5% available (free) chlorine can be diluted using the table below to achieve a 100 ppm concentration of available chlorine.

Volume of water	Concentrated Chlorine (3.5%)	Wetting Agent (optional)
1 litre	3 mL	1 mL
5 litres	15 mL	3 mL
10 litres	30 mL	7 mL
50 litres	150 mL	35 mL

**Goal**

To prevent ice from becoming contaminated through unclean machines and equipment.

Act requirements:

- All food that is produced or processed and handled must be handled in a way that minimises contamination or deterioration.
- There must be procedures in place that prevent, eliminate or reduce hazards during the production, processing and handling of food.

**Why?**

- Harmful microbes can grow on the surfaces of ice machines and on equipment that are used with ice machines.
- Ice can become contaminated from dirty hands, contact surfaces, chemicals, pests and other foreign objects.

**How this is done**

Water that comes in direct or indirect contact with the ice machine must be potable. See *Places Basics – Water Supply* to confirm source and maintenance requirements.

**Good hygiene practices**

When handling ice you must make sure good hygiene practices are followed:

- Scoops, containers and other equipment that comes into contact with ice must be regularly cleaned and sanitised
- Equipment/utensils used with ice must be stored hygienically when not being used and in ways that prevent contamination.
- Hands and handles of shovels, scoops etc. must not come into contact with ice.
- Do not return unused ice to ice-chest.
- Keep doors to ice-chest closed except when removing ice.

**Cleaning requirements**

Clean and maintain ice machines according to manufacturers' instructions.

**Buying and using ice from supplier**

- The operator must ensure all responsible steps are taken to assess and confirm that the ice received from the supplier is safe and suitable.
- Bags of ice must be received frozen and free from contamination or damage. Ice spilled from broken/split bags/containers must not be used.
- Bags must be stored in the freezer and where they cannot become contaminated.

**What if there is a problem?**

- Have an alternative ice source if your machine breaks down and a back up procedure for making sure it is safe.
- If cleaning or handling procedures aren't followed find out why and take action to stop it happening again.
- Retrain staff if necessary.

**Write it down**

Include your ice machine on your maintenance schedule and make sure an external contractor checks it periodically.

Write down in the Cleaning schedule the process for cleaning (and sanitising) ice machines and other equipment and the frequency.

Write in the Diary any problems that occurred and what you did to prevent them from happening again.



# Staff training - Serve Safe

Name:	Telephone:
Position:	Start date:
Address:	

Topic	Relevant	Employee signed*	Supervisor signed†	Date
<b>Essential training</b>				
<i>Food service and Retail Basics – Staff training</i>	<input checked="" type="checkbox"/>			
	<input checked="" type="checkbox"/>			
<b>Training as needed</b>				
Preparation				
Cooking poultry				
Proving that a time/temperature cooks poultry				
Checking poultry is cooked				
Cooking				
Hot holding prepared food				
Cooling hot prepared food				
Reheating prepared food				
Display and self service				
Display for retail sale				
Off-site catering				
Ice				
Sushi				
Chinese style roast duck				
Doner kebab				
Cooking using the sous vide technique (cook-serve)				
Cooking using the sous vide technique (cook-chill)				
Texture modified foods				
Nutritional supplements and shakes				

\* I acknowledge that I have received training in the procedure and agree to follow it.

† The employee has been trained and has demonstrated a good understanding of the procedure and has been observed consistently following it.

## Other training

Date	Details
Notes:	







# Off-site catering pre-event checklist

The procedures in the FCP must be followed when catering off site. This includes any record-keeping requirements.

Function	
Name of function:	
Client:	Client telephone:
Venue:	Date:
Style of function:	
Food service: Cocktail/served meal/buffet meal    hot food    cold food	
What food preparation/cooking will be carried out on site?	
Event: Indoor/outdoor (e.g. tent) [specify]	Duration: One day/other [specify]
Catering facilities: In building/other [specify]	
Guest number(s):	Serving time(s):
Special dietary needs (e.g. allergies):	
What is the access to the venue?	

Check that the following facilities, equipment and services are available at the venue or site and that they will be suitable and sufficient for the catering activities to be undertaken.

Venue	Yes	No	What needs to be provided
<b>Facilities and equipment</b>			
Dry goods storage			
Catering area (size, construction etc)			
Benches			
Sinks/wash-hand basins			
Hot water			
Fridge storage			
Freezer storage			
Oven(s)			
Number of hotplates			
Hot-holding (bain-marie etc)			
Clearing zone for used/dirty dishes etc			
Staff changing area			
Toilet facilities			
<b>Services provided</b>			
Electricity supply (and sufficient electrical points)			
Water (potable water supply)			
Waste			
<b>Staff</b>			
Sufficient trained staff available			
<b>Transportation</b>			
Suitable means of transporting food			















# Proving a cooking method for sous vide

This table identifies what time and temperatures checks you must carry out for each sous vide item or dish to ensure that it is properly cooked.

Proving a cooking method for sous vide																
Product 1: Is the food cook-serve or cook-chill?																
Food item and details (i.e. weight, size, thickness of cut, ingredients etc):																
Water bath: volume and how many items the water bath can hold:																
Water bath temperature is set at <input type="text"/> °C				Water bath temperature (recorded every 20 minutes)				Time								
								Temp								
Time																
Temp																
Cooking details																
Test batch number	How many vacuum packs were placed in the water bath?	Date	Target time and temperature (TxT)	Time food placed in water bath	Time to reach selected internal food temp (come up time)		Holding period		2nd probe		Initials	Comments				
					time	temp	time	temp	time	temp						
1																
2																
3																





