FoodSmart

VICTORIA State Government | Department of Health

This program was last updated May 2025

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#1 Purchasing and receiving food

Issues

1. Contamination of food with bacteria, chemicals or other things that should not be in food.

Food and ingredient suppliers	
What can I do?	• Only buy from reliable suppliers. • Write or speak to your suppliers detailing the conditions you want the food to be delivered in. • Maintain a current list of your food suppliers.
How can I check?	• Inspect all food deliveries from your suppliers. • Observe whether the driver and the truck are clean and check that the vehicle is not carrying animals or chemicals in the same area as the food.
What if it is not right?	• Reject suppliers that don't provide food the way you want it. • Reject deliveries if the inside of the delivery vehicle is dirty, has animals on board or is carrying chemicals with food.

Packaging	
What can I do?	• Make sure food is protected by proper packaging and/or containers. • Transfer all deliveries into a suitable storage area as soon as possible.
How can I check?	• Examine the packaging to see if it is damaged. • Make sure that all products are properly labelled, including the product name and address of the manufacturer, a batch code or date code, an ingredient list and allergen and food intolerance information. • All products should be within their 'best before' or 'use-by' dates. Look for any visible signs of insects, insect eggs or other items that should not be in or near food, such as dirt, glass and rubbish.
What if it is not right?	• Reject products in damaged packaging. • Reject pre-packaged foods that don't have the name and address of the supplier, a batch code or date code, and an ingredient list on the label. • Reject packaged food if the supplier cannot provide accurate information about ingredients and allergens. • Reject any product that is contaminated.

Food handling practices

#1 Purchasing and receiving food

Eggs	
What can I do?	• Don't buy cracked or dirty eggs.
How can I check?	• Check to see whether eggs are cracked or dirty.
What if it is not right?	• Reject any cracked or dirty eggs received from suppliers. **Do not use them.**

Food handling practices

#1 Purchasing and receiving food

2. Growth of bacteria in food that spends too long in the temperature danger zone of 5 °C to 60 °C.

What can I do?	• Make sure cold food is kept at 5 °C or colder. • Make sure frozen foods are frozen hard. • Make sure hot food is kept at 60 °C or hotter.
How can I check?	• Use a probe thermometer to regularly measure the temperature of food deliveries from each supplier of high-risk food. • For new suppliers, check the temperature of deliveries more often until you are sure that the food is meeting temperature requirements. • Check the temperature of each delivery for any supplier you feel is not consistently meeting temperature requirements. • Tap frozen foods to test that they are frozen hard. Make sure an employee of your business is available to check when goods are delivered. • If you have an arrangement with your suppliers for food to be delivered outside business hours, check the food before storing it. • If you collect food from your supplier and transport it yourself, check that it is safe and kept at the right temperature during transport and storage.
What if it is not right?	• If food is delivered in the temperature danger zone of 5 °C to 60 °C, ask the delivery person to show you evidence of the temperature of the food for the previous two hours. • Reject high-risk foods that are delivered at the wrong temperature or where evidence of the temperature is not provided. • Stop purchasing food from the supplier if it does not meet your requirements. • Improve your transport and storage arrangements.

Food handling practices

#1 Purchasing and receiving food

Required records

My food suppliers

To check

All my suppliers

How often

It must be up to date. Ensure it includes current suppliers and all your suppliers for the previous two years.

Food handling practices

#1 Purchasing and receiving food

What are the risks?

- Unsafe food may contaminate other foods and may result in the sale of unsafe food to your customers. To protect your business, check all food received from your suppliers.
- High-risk foods delivered at the wrong temperature can allow bacteria to multiply. This can reduce shelf life and cause food poisoning.
- Damaged packaging may allow bacteria to contaminate food or may be a sign that insects, mice or rats have eaten or contaminated the food inside. Pests can carry disease, and insects can lay eggs on food.
- Food past its use-by date can be unsafe.
- Pre-packaged food received from suppliers must be labelled and the ingredients listed so that you can give your customers accurate information about the food you sell. A label will also help you identify food if it is recalled. This includes information about the ingredients that are a known source of, or contain, allergens.
- You must also be able to provide information to customers about all other food, including food that is packaged on-site (and not required to be labelled) or that is supplied unpackaged, such as ready-to-eat food served to customers.
- Foods stored near chemicals can become unsafe and their flavour can be affected.
- All food must be protected from contamination.

Food handling practices

#1 Purchasing and receiving food

Tips

- Check food when you buy it. You need to know whether you are getting what you ordered and paid for.
- Satisfy yourself that your suppliers know that they are required by law to comply with the *Australia New Zealand Food Standards Code Part 1.2.1 Application of labelling and other information requirements*, including the standard on mandatory warning and advisory statements and declarations. All pre-packaged food must be labelled according to the Code. For more information see <www.foodstandards.gov.au>.
- Food you receive should be in good condition, with enough time to sell or use it before its 'best-before' or 'use-by' dates.
- To find out more about food allergens and intolerances and how you may help customers with questions see <www.health.vic.gov.au/public-health/food-safety/food-businesses/food-allergen-awareness>. For tips on using a probe thermometer to take food temperature see **Support program 5: Thermometers and equipment.**

Food handling practices

#2 Storage

Issues

1. Food poisoning bacteria can grow quickly in high-risk foods if they are not stored at the correct temperature.

Cold food	
What can I do?	• Store cold food at or below 5 °C. • Make sure the freezer and refrigerator or cool room can keep food at the right temperature. Check that thermometers are reading accurately. • Keep high-risk foods (such as meat and seafood), and any raw egg products (such as chocolate mousse or mayonnaise), or raw eggs used to make such products under refrigeration when not in use.
How can I check?	• Measure core temperatures of high-risk food stored in the refrigerator using a probe thermometer regularly (at least one check per day). Record results in **Record 2: My temperature checks of food in cold to hot storage**. • Check your completed food temperature records (Record 2) to ensure that safe food temperatures are maintained. • If using remote temperature monitoring IT systems, refer to the Department of Health *Guide to remote monitoring of temperatures in food storage units* for advice on how to check and monitor the operation of your system. Access the guide at <https://www.health.vic.gov.au/public-health/food-safety/food-businesses/food-how-to-keep-it-safe/remote-temperature-monitoring-food>.
What if it is not right?	• If refrigeration units are not keeping food at or below 5 °C, adjust the settings or contact a refrigerator specialist. • Throw out high-risk foods if you suspect they have not been stored at the correct temperature.

Food handling practices

#2 Storage

Frozen food	
What can I do?	• Store frozen food at or below -15 °C. • Make sure the freezer can keep food at the right temperature. • Check that thermometers are reading accurately.
How can I check?	• Measure core temperatures of high-risk food stored in the freezer using a probe thermometer regularly (at least one check per day). Record results in **Record 2: My temperature checks of food in cold to hot storage**. • Check your completed food temperature records (Record 2) to ensure that safe food temperatures are maintained. • If frozen food is warmer than -15 °C, test whether it is frozen hard. If it is frozen hard it can still be used. • If using remote temperature monitoring IT systems, refer to the Department of Health and Human Services *Guide to remote monitoring of temperatures in food storage units* for advice on how to check and monitor the operation of your system. Access the guide at <https://www.health.vic.gov.au/public-health/food-safety/food-business>
What if it is not right?	• If frozen food shows signs of thawing, either continue thawing and use it immediately, or discard the food. • Throw out high-risk foods if you suspect they have not been stored at the correct temperature.

Food handling practices

#2 Storage

2. Growth of food poisoning bacteria in food.

Shelf life	
What can I do?	• Make sure high-risk food is date coded, including the date the product was opened/repacked. • Follow the manufacturer's instructions for storing opened products. • Mark food prepared on the premises with the date it is made. Rotate stock and use older stock first to make sure foods are not kept beyond their use-by date.
How can I check?	• Examine use-by dates regularly.
What if it is not right?	• Throw out food once the use-by date has passed.

Food handling practices

#2 Storage

3. Food can be affected by non-food contaminants (chemicals, pests, other materials) or allergen

Opened food	
What can I do?	• After opening food, reseal the container or put food into clean, food-grade containers. • Label containers with the product, batch number, ingredients and use-by date or keep the ingredient information on file. This will ensure you know the ingredients of the food (for example, to identify any possible allergens). • Store foods known to contain allergens in a way that prevents them from contaminating other foods. • If food unpackaged, ensure it is adequately protected from contaminants. • Store food away from chemicals.
How can I check?	• Regularly check that stored foods are not at risk of contamination.
What if it is not right?	• Dispose of any unlabelled food you cannot identify, or which you suspect has become contaminated. • If non-allergenic food may have been contaminated with an allergen, make sure that it is not used in the preparation of food that is intended to be allergen free. • Throw out food if you suspect it has been contaminated. If food may include allergens, refer to **Support program 1: Food allergens, intolerances and general information for customers** about making information available to customers and staff.

Storage areas	
What can I do?	• Keep all storage areas clean and keep food off the floors so that you can clean them easily and regularly.
How can I check?	• Check storage areas.
What if it is not right?	• Improve cleaning and layout of storage areas.

Food handling practices

#2 Storage

Pest control	
What can I do?	• Protect food from pests. • To keep pests out of storage areas, keep the walls, doors and windows of the building and any vehicles in good repair.
How can I check?	• Regularly check premises and vehicles for signs of pests. Inspect bait stations and look for signs of pest activity, such as droppings, webs and feathers.
What if it is not right?	• Repair premises and vehicles to prevent entry of pests. • Lay baits where appropriate. • Throw out food that shows signs of pest damage or which you suspect may be contaminated.

Non-food items	
What can I do?	• Store packaging, utensils, equipment, and tableware so that they remain clean and are protected from contamination. • Dispose of tableware that is chipped, broken or cracked.
How can I check?	• Regularly check that food, utensils, equipment, and tableware are clean and stored away from chemicals.
What if it is not right?	• Clean and sanitise any utensils, equipment, or tableware if you think may have been contaminated. • Replace damaged utensils and equipment.

Food handling practices

#2 Storage

4. Cold ready-to-eat food can be cross-contaminated with food poisoning bacteria.

Ready-to-eat food	

What can I do?	• Store ready-to-eat food separately from raw food in a separate refrigerator or freezer.
	• If this is not possible, store ready-to-eat food:
	  ○ above raw food
	  ○ in a separate part of the refrigerator/ freezer
	  ○ in covered containers.

How can I check?	• Regularly check stored food to see that it is not at risk of contamination. • Make sure that water and condensation from one food cannot drip onto other food.
What if it is not right?	• Throw out ready-to-eat food if you suspect it has been contaminated.

Food handling practices

#2 Storage

Required records

My temperature checks of food in cold or hot storage

To check

The temperature of high-risk food.

How often

Check and record the temperature at least once a day of a high-risk food that is kept in each freezer, refrigerator and cool room.

Food handling practices

#2 Storage

What are the risks?

- Check stored food to ensure that it is not left in dangerous conditions. For example, high-risk food held at room temperature, which is in the temperature danger zone of 5 °C to 60 °C, can promote the growth of food poisoning bacteria and cause illness when eaten.
- Some packaged foods will have a shorter shelf life after they are opened.
- Bacteria from raw or spoiled food can drip onto ready-to-eat food and cross-contaminate it.
- Food that is not properly wrapped or covered in storage can become contaminated by bacteria, foreign objects, dirt, chemicals or allergens.
- Food containing allergens may contaminate other food.

Food handling practices

#2 Storage

Tips

- Store food in accordance with the manufacturer's instructions.
- To find out more about storing foods containing allergens and how you may help customers with questions, see <www.health.vic.gov.au/public-health/food-safety/food-businesses/food-allergen-awareness>.
- Don't crowd the storage area (including the cool room or freezer).
- If you are concerned about pests, consider hiring a professional pest control service.
- Store whole eggs in cool rooms or refrigerators wherever possible and make sure they are kept dry and clean.
- Don't overload freezers or refrigerators.
- Have refrigerators and coolrooms regularly checked and serviced by a qualified technician.
- During a power failure, keep all cool room and refrigerator doors closed. Check the temperatures of all food when the power is restored.

Food handling practices

#3 Thawing frozen food

Issues

1. Growth of food poisoning bacteria

Defrosting food	
What can I do?	• Make sure that frozen foods – especially poultry, seafood, large joints of meat or kebab spits – are thoroughly defrosted before cooking or follow the manufacturer's instructions.

How can I check?	• Ensure that foods are fully defrosted by:
	  ○ checking for ice in the food using a skewer or a probe thermometer
	  ○ checking that poultry joints are flexible.

What if it is not right?	• Defrost for a longer period. • Defrost small amounts, which will defrost more quickly.

Refreezing food	
What can I do?	• Do not refreeze defrosted or partially cooked food a second time. Use it immediately or date mark and refrigerate it.
How can I check?	• Regularly look at where and how food is being defrosted.
What if it is not right?	• Defrost only the amount of food you plan to cook. • Use any refrigerated defrosted food by the use-by date.

Food handling practices

#3 Thawing frozen food

2. Defrosting raw meat and seafood can cross contaminate cooked and ready-to-eat foods.

Cross-contamination	
What can I do?	• Keep defrosting food from touching cooked and ready-to-eat foods and make sure raw meat or seafood juices do not drip onto other foods.
How can I check?	• Regularly inspect defrosting food to ensure it is kept separate from cooked and ready-to-eat foods.
What if it is not right?	• Dispose of ready-to eat foods that may be contaminated by defrosting food. • Throw away thawed food if uncovered or in damaged packaging. Clean and disinfect contaminated areas.

Food handling practices

#3 Thawing frozen food

What are the risks?

- Food poisoning bacteria can grow in food that is not defrosted properly. If food is still frozen or partially frozen, it will take longer to cook. The outside of the food could be cooked, but the centre might not be, which means it could contain food poisoning bacteria.
- The safest place to thaw frozen food is in the refrigerator or cool room. This takes longer than at room temperature, so you have to plan ahead. Some food can take as long as two days to thaw completely.
- To prevent cross-contamination when defrosting, keep meat, poultry and seafood separate from other food and in suitable containers. Make sure juices from thawing food do not drip onto or contact other food as this can cause cross-contamination.

Food handling practices

#3 Thawing frozen food

Tips

- Food must be thoroughly defrosted before cooking, unless the manufacturer's instructions tell you to cook it from frozen (for example, ready-to-eat foods, such as frozen meals or individual quick-frozen foods).
- Whatever method you use to defrost food, try to use the food as soon as it is defrosted.
- If you defrost a lot of foods in your business, consider setting aside refrigerator space specifically for defrosting or using a special defrosting cabinet.
- If food is thawed using cold running water, it should be placed in a clean container that does not retain water (such as a colander), and the water should be of drinkable quality. This method is not recommended as it uses a lot of water.
- Food can be defrosted quickly in a microwave oven using the 'defrost' setting. Foods defrosted in this way should be cooked immediately, as the temperature of the outside of the food is usually different to the temperature of the inside of the food. This method allows food poisoning bacteria to grow rapidly. Throw away any high-risk food thawed in a microwave oven and left to stand for more than two hours.
- When it's not possible to defrost food in the refrigerator or chiller, defrost it on a bench. Make sure the food does not stay in the temperature danger zone of 5 °C to 60 °C for more than a total of four hours before it is eaten. Place food in a covered dish or container to make ensure it is not contaminated and does not contaminate other foods.

Food handling practices

#4 Preparation

Issue

1. Growth of food poisoning bacteria in food.

Temperature control	
What can I do?	• Make sure that the time high-risk food spends in the temperature danger zone of 5 °C to 60 °C is as short as possible – up to a cumulative total of four hours or use the 2 hour/4 hour rule.
How can I check?	• Regularly look at how food is being prepared. • Measure the amount of time that the preparation processes take. Refer to **Support program 8: Time control** to use the 2 hour/4 hour rule.
What if it is not right?	• Only take from the refrigerator the amount of food you can prepare within a safe time period. • Return food to the refrigerator if there are delays.

Food handling practices

#4 Preparation

2. Cross-contamination of ready-to-eat food with food poisoning bacteria from hands, utensils, cloths surfaces, foods (for example, high-risk foods such as meat, seafood, poultry or eggs, or raw vegetable or other items.

Cross-contamination of ready-to-eat food	
What can I do?	• Wash hands before handling ready-to-eat food, equipment and utensils and use gloves correctly where appropriate. • Handle food as little as possible. Use tongs or other utensils where appropriate. • Check with your council environmental health officer if you need advice about using gloves properly.
How can I check?	• Regularly look at how food is being prepared.
What if it is not right?	• Dispose of food if you are not confident that it has been safely handled. • If non-allergenic food may be contaminated with an allergen, make sure that it is not used in the preparation of food that is intended to be allergen free. • If food may include allergens, refer to **Support program 1: Food allergens, intolerances and general information for customers** about making information available to customers and staff.

Cross-contamination from cleaning and equipment	
What can I do?	• Use clean, sanitised equipment and utensils. • Clean and sanitise cleaning cloths regularly and replace them when they are no longer suitable for use. • Throw away single-use items (for example, disposable food containers or gloves) after using them.
How can I check?	• Inspect equipment, utensils and cleaning cloths regularly to make sure they are clean. • Check that single-use items are not re-used.
What if it is not right?	• Replace with clean equipment, utensils and cleaning cloths. Review cleaning schedules and practices. • Repair or replace equipment that cannot be properly cleaned. • Train staff.

Food handling practices

#4 Preparation

Cross-contamination from raw foods	
What can I do?	• If possible, use clearly defined chopping boards and benches for raw and ready-to-eat foods. • If benches, chopping boards and other equipment are used for raw and ready-to-eat foods, you must separate raw foods and ready-to-eat-foods by preparing them at different times. • Wash and sanitise all equipment and benches between uses.
How can I check?	• Inspect any benches and chopping boards intended to be used solely for ready-to-eat foods and ensure they are only used for that purpose. • Check that all equipment and surfaces are washed and sanitised.
What if it is not right?	• Review cleaning schedules and practices.

Food handling practices

#4 Preparation

3. Cross-contamination of ready-to-eat fruit and vegetables with food poisoning bacteria found in soil (from manure or bad quality water).

Preparing fruit and vegetables	

What can I do?	• When preparing fruit, vegetable and salad ingredients:
	  ○ peel, trim or remove the outer parts, as appropriate
	  ○ wash them thoroughly in clean drinking water (ideally in a separate sink used only for food preparation. If this is not possible, thoroughly clean the equipment used afterwards)
	  ○ clean and sanitise chopping boards and work surfaces before preparing other foods.

How can I check?	• Inspect the food to see that it is free of dirt.
What if it is not right?	• Wash thoroughly or throw out.

Food handling practices

#4 Preparation

4. Cross-contamination of non-allergenic foods with allergens from other foods, cooking equipment and surfaces that have been in contact with allergens.

Cross-contamination from allergens	
What can I do?	• Clean equipment after each use. • Use separate utensils to handle foods containing allergens. • Wash hands after handling foods containing allergens.
How can I check?	• Regularly look at how food is being prepared. • Inspect equipment and cloths regularly to make sure they are clean.
What if it is not right?	• Dispose of food if you are not confident that it has been safely handled. • If non-allergenic food may be contaminated with an allergen, make sure that it is not used in the preparation of food that is intended to be allergen free. • If food may include allergens, refer to **Support program 1: Food allergens, intolerances and general information for customers** about making information available to customers and staff. • Train staff.

Food handling practices

#4 Preparation

5. Eggs can contain *Salmonella* bacteria which causes food poisoning. Bacteria on the outside of shell can enter the egg through cracks that are sometimes too fine to see. Once inside the egg, bacteria can grow, increasing the risk of illness.

Spreading *Salmonella* bacteria from raw egg to ready-to-eat foods through handling or the use of contaminated kitchen implements (such as blenders).

Contamination from raw eggs	
What can I do?	• Handle and store eggs and raw egg products safely. • Do not top up raw egg products from different batches. • Once eggs are broken, use them immediately wherever possible. • Do not wash eggs – the shell becomes more porous when wet, making it easier for bacteria to get into the egg. If you are using your own eggs and they need to be cleaned refer to: <https://agriculture.vic.gov.au/biosecurity/food-safety/food-safety-for-egg-producers/producing-safe-eggs-at-home>.
How can I check?	• Check that only clean, uncracked eggs are being used. • Ensure staff know not to top up batches of raw eggs. • Ensure staff know how to handle raw egg products safely, including not topping up batches of raw egg product.
What if it is not right?	• Throw out raw egg mixtures and raw egg products if you suspect they have been in the temperature danger zone of 5 °C and 60 °C for more than four hours. • Throw out raw egg products if you suspect they have come from batches that have been mistakenly topped up. • If you cannot prepare raw egg products safely then consider alternatives, such as pasteurised egg products.

Food handling practices

#4 Preparation

What are the risks?

- Raw food contains bacteria, so it's important to follow hygienic practices to prevent food poisoning
- and keep food safe.
- Preparation brings food out of safe storage and exposes it to food safety risks:
  - If food is left too long out of refrigeration, bacteria can quickly multiply and cause food poisoning.
  - Bacteria can be transferred to food from unwashed hands and from clothing - this contamination can occur even when using gloves.
  - Bacteria can be transferred to food from equipment and utensils and contaminate it.
  - Bacteria on raw food, including food used for garnishes, can contaminate cooked or ready-to-eat food.
  - Foreign objects, such as dust or pest droppings, can come into contact with uncovered food and contaminate it.
  - Allergens can spread from one type of food to another from surfaces, hands and equipment.

Food handling practices

#4 Preparation

2 hour/4 hour rule

The 2 hour/4 hour rule uses time and temperature control to keep food safe during preparation. If you use this rule in your business, refer to **Support program 8: Time control** for more details.

Food handling practices

#4 Preparation

Tips

- Wash ready-to-eat fruit and vegetables on the day you intend to use them.
- Make raw egg products daily in small batches rather than in large containers.
- When using eggs, minimise contact between the shell and the contents of the egg.
- To find out more about allergens and food intolerances and how you may help customers with questions see <www.health.vic.gov.au/public-health/food-safety/food-businesses/food-allergen-awareness>.

Food handling practices

#5 Cooking food

Issues

1. Food poisoning bacteria can survive and cause illness if food is not properly cooked

Cooking food	
What can I do?	• Cooking food thoroughly will kill most food poisoning bacteria. To do this you must ensure that the core temperature reaches 75 °C or hotter.
How can I check?	• Use a probe thermometer to measure the temperature of the thickest part or centre of the food. Record results in **Record 3 my cooking temperature checks**. • Check your completed food temperature records (Record 3) to ensure that safe cooking temperatures are maintained.
What if it is not right?	• Cook the food for longer. • Increase the temperature of the cooking equipment.

Food handling practices

#5 Cooking food

Cooking equipment	
What can I do?	• Use cooking time and cooking equipment temperatures to ensure that food reaches 75 °C or hotter and is cooked to the manufacturer's instructions. • To ensure it is completely cooked, grill or fry meat (including chicken) that has been cooked on a kebab/spit on a hot plate before serving it to the customer. This is to make sure it is fully cooked and safe to eat.
How can I check?	• Regularly measure the temperature of the thickest part of the food using a probe thermometer. • Look at how it is being cooked: Liquids should bubble rapidly when stirred. • Ensure the largest piece of meat in stews and curries is cooked through. • Combination dishes (for example, Shepherd's pie) should be steaming in the centre. • Processed meat products (for example, sausages and burgers) should be hot through with no pink or red in the centre. Poultry should be fully cooked through to the thickest part of the leg. • Monitor the serving of food.
What if it is not right?	• Review your cooking method. Increase the time or temperature, use different equipment or reduce portion sizes. • Repair or replace equipment.

Food handling practices

#5 Cooking food

Food cooked too rare	
What can I do?	• Some foods can be cooked to customer preference (for example, rare or medium-rare steaks or fish). In such cases the internal temperature does not have to reach 75°C.

How can I check?	• Monitor how food is cooked:
	  ○ All outside surfaces of whole fish, whole joints of meat or steaks should be fully cooked (for example, by sealing in a pan).
	  ○ The colour and texture of fish should change at the centre or near the bone during cooking.
	  ○ Shellfish such as prawns and crabs should change colour and texture during cooking.
	  ○ The shells of shellfish (for example, mussels and clams) should open, and the flesh inside should have shrunk during cooking.
	  ○ If any high-risk food is not thoroughly cooked it is very important to ensure that the time it remains in the temperature danger zone of 5 °C to 60 °C is as short as possible. Serve these foods as quickly as possible. For more information on keeping high risk food out of temperature control refer to **Support program 8: Time control.**

What if it is not right?	• Cook the food for longer. • Review your cooking method.

Food handling practices

#5 Cooking food

2. Food poisoning bacteria can survive on meat cooked on a spit and cause illness if food is not properly cooked.

Cooking and cooling	

What can I do?	• All meat on a spit needs to be thoroughly cooked once cooking has started.
	  ○ Do not leave it out overnight.
	  ○ Left-over cooked meat must be stored safely.

How can I check?	• Use a probe thermometer to measure the temperature of the thickest part or centre of the food. • Check your completed food temperature records (Record 3) to ensure that safe cooking temperatures are maintained. • Follow **Practices 6 Cooling and freezing food to keep the food safe.**

What if it is not right?	• If food does not reach 75 °C on the spit, either
	  ○ complete the cooking on a hotplate or pan
	  ○ discard, partially cooked meat as it must not be stored for later use.

Food handling practices

#5 Cooking food

3. Some dried pulses (such as red kidney beans) contain natural toxins that could make people ill unless they are destroyed by soaking and cooking

Directions for use	
What can I do?	• Follow the instructions on packaging for soaking and cooking.
How can I check?	• Monitor how the food is prepared.
What if it is not right?	• Ensure the instructions are followed. If there are no instructions with the product, check in a reliable recipe book.

Food handling practices

#5 Cooking food

Required records

My cooking temperature checks

To check

To check that the cooking temperature reaches 75 °C or above

How often

At least once a month

Food handling practices

#5 Cooking food

What are the risks?

- Raw or under-cooked foods are the main source of bacteria in the kitchen. Food poisoning bacteria multiply rapidly when they are in the temperature danger zone of 5 °C and 60 °C, if food is not thoroughly cooked or when cooked foods come into contact with raw food.
- Boiling soups, sauces, gravies and casseroles can reduce bacteria. However, some bacteria can survive this and must be handled with care. If food is not handled safely before cooking, it may still be unsafe to eat even after cooking.
- Allergens can contaminate non-allergenic food via equipment, surfaces and hands.

Food handling practices

#5 Cooking food

2 hour/4 hour rule

The 2 hour/4 hour rule uses time and temperature control to keep food safe during preparation. If you use this rule in your business, refer to **Support program 8: Time control** for more details.

Food handling practices

#5 Cooking food

Tips

- Create recipe cards for staff with clear instructions on cooking times and temperatures and adjust if necessary.
- Preheat cooking equipment before use; otherwise, food will take longer to cook and cooking times in recipes or the manufacturer's instructions may not be long enough to kill bacteria.
- To check a pork joint or rolled meat joint, insert a skewer into the centre until juices run out. The juices should not have any pink or red in them. Turn meat and poultry during cooking as this helps it to cook more evenly. Check the core temperature of foods with a probe thermometer.
- Avoid cold spots in liquid dishes by stirring frequently.
- Before cooking mussels and clams, throw away any with open or damaged shells.
- For more information on allergens and food intolerances see: <www.health.vic.gov.au/public-health/food-safety/food-businesses/food-allergen-awareness>.

Food handling practices

#6 Sous vide

Issues

1. **Toxic chemicals from unsafe packaging leach into the food. The packaging or bag breaks, leaks or does not seal.**

Package and seal	
What can I do?	• Purchase bags suitable for sous vide cooking and chilling processes from specialist packaging suppliers. • Reject any leaking / unsealed bags.
How can I check?	• Verify with your supplier that the bags are food safe and suitable for this practice. Obtain the specification from the bag supplier. • Check each bag does not leak after vacuum sealing.
What if it is not right	• Reject bags from the supplier if they are not food-safe grade. • Reject bags that do not seal effectively. • Reject or discard food cooked in unsuitable or leaking bags. • Reseal food in suitable bags and continue the process only if safe to do so.

Food handling practices

#6 Sous vide

2. Food poisoning bacteria survive and grow.

Heat to cooking temperature	

What can I do?	• Ensure the food heats up quickly by checking:
	  ○ The water is at the cooking temperature before adding the food to be cooked.
	  ○ The food is no thicker than that usually cooked.
	  ○ There is space between bags to allow good water or steam flow between bags.
	  ○ That all air is removed from the bag, and it is not floating or the heat will not penetrate the food evenly.
	  ○ There is even distribution of heat in the equipment by stirring or using recirculating systems. **Do not overload the equipment. Do not heat up food between 5 °C – 60 °C for more than 6 hours.**

How can I check?	• Use a calibrated thermometer to check the temperature of the water. • Do not add the food until the water is at the right temperature. • Use an accurate timer or alternative method to track the heating up time. • Visually check that all bags are separate from each other and that none are floating. • Use a probe thermometer to ensure the food reaches the necessary temperature for the minimum set time to produce safe food. • Undertake scheduled maintenance and calibration to ensure equipment is operating correctly and accurately.
What if it is not right	• Do not start cooking if the required water temperature is not reached. • Check the equipment is working correctly and replace or arrange a service if not. • Physically separate the bags with a rack or other equipment. • Ensure all packages of food are submerged and in full contact with water or steam. • Stir the water to better circulate heat. • Reject or discard food if the heating process does not reach the cooking temperature quickly enough, or if you suspect food has become unsafe.

Food handling practices

#6 Sous vide

3. Food poisoning bacteria survive and grow and produce toxins.

Cook	

What can I do?	• Cook food thoroughly by:
	  ○ Ensuring the food is cooked for at least the minimum time at the correct temperature.
	  ○ Visually checking there is good water flow between bags.
	  ○ Ensuring there are no bags floating above the surface of the water.
	  ○ Measure the core temperature of the food during the cooking process when required.

How can I check?	• Monitor the time that the food takes to heat up and cook with calibrated and sanitised probe thermometer. • Use an accurate timer or alternative method to track the cooking time.
What if it is not right	• Dispose of food if the heating process does not reach the required time and temperature requirements. **Dispose of food held between 5 °C – 60 °C for longer than 6 hours.**

Food handling practices

#6 Sous vide

4. **Food poisoning bacteria grow from spores that survive cooking, and form toxins if food is not cooled quickly enough.**

Chill	
What can I do?	• Food must be cooled from 60°C (or less) to 21 °C or less in 2 hours; and from 21 °C – 5°C within a further four hours (a total of 6 hours). • Cooling food within this timeframe will prevent bacterial spores from growing and potentially producing harmful toxins. • Ensure the cooling method (ice bath, coolroom, etc.) cools the food in the required time.
How can I check?	• Monitor the food temperature during cooling with a calibrated and sanitised probe thermometer. • Develop a method for how long it takes to cool the food safely in an ice bath or coolroom. • Record the procedure, and monitor when required.
What if it is not right	• Reject or discard the food or hold the food and undertake appropriate microbial testing to determine whether it is safe if it has not been cooled quickly enough.

Food handling practices

#6 Sous vide

5. Food poisoning bacteria grow in food stored at incorrect temperatures.

Chill	
What can I do?	• Store unopened, cooked sous vide foods at 5 °C or below for no longer than 5 days. • Ensure the packaging seal remains intact to prevent contamination.
How can I check?	• Monitor the fridge/coolroom temperature. • Rotate stock to ensure that oldest stock is used first. • Label food clearly with a maximum 5 day shelf-life
What if it is not right	• Discard food that has not been stored at 5°C or below, or if it exceeds 5 days storage.

Food handling practices

#6 Sous vide

6. Food poisoning bacteria survive and grow and form harmful toxins

Reheat	
What can I do?	• Reheat food rapidly and ensure that it reaches the desired temperature as needed. • **Do not reheat sous vide foods more than once.** • **Do not exceed 4 hours reheating at 60 °C or below.**
How can I check?	• Check the core temperature of the food with a calibrated and sanitised probe thermometer to ensure that it reaches the desired temperature. • Measure the reheating time accurately and do not exceed 4 hours at 60oC or below
What if it is not right	• Continue to reheat. Check again and if the target temperature is not reached, stop the process and check that the equipment is working correctly. • **Discard food held between 5 °C and 60 °C for longer than 4 hours.**

Food handling practices

#6 Sous vide

Required records

Sous vide cooking method

To check

Cooking method

How often

Complete this record as you add or remove items or modify procedures for all food on your menu.
Sous vide batch information

To check

Batch information

How often

Two items monthly

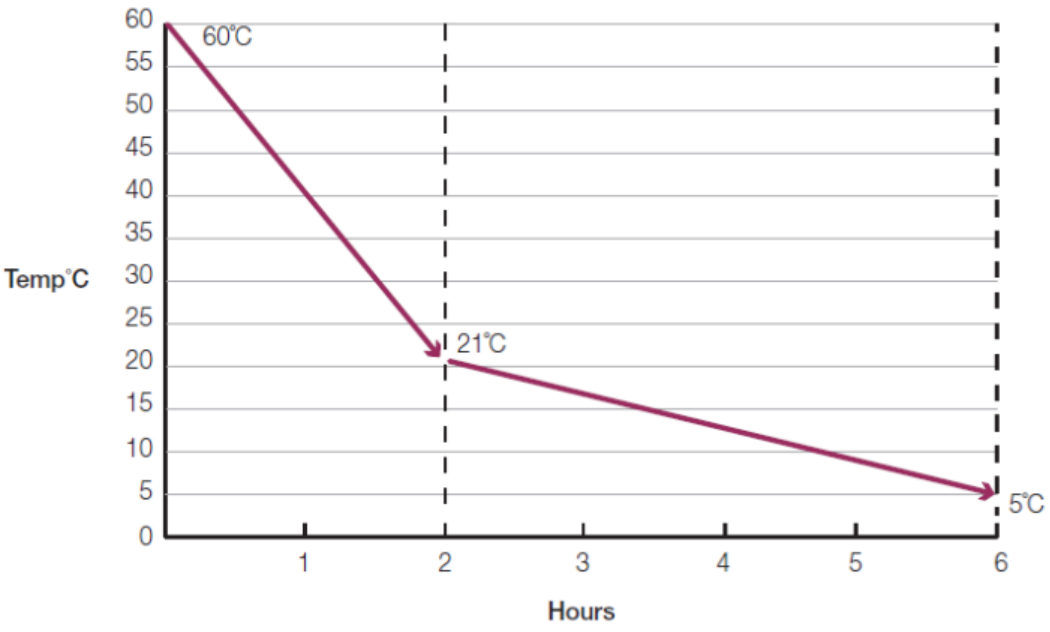
Food handling practices

#6 Sous vide

What are the risks?

- Sous vide cooking requires precise time and temperature combinations to effectively manage the food safety risks.
- The cooking process must heat the food to a sufficient temperature and cook it for a sufficient time to kill potentially hazardous bacteria and to prevent their growth in the food. If the cooking processes does not meet the minimum time and temperature requirements, the food may be unsafe to eat.
- **Food must not be cooked below 55 °C as temperatures below 55 °C will not kill potentially hazardous bacteria that may be present.**
- Remember: Food cooked between 55 °C and 60 °C must not exceed a total heating up and cooking time of longer than six hours. After this time, *Clostridium perfringens* bacterial spores can grow and produce toxin that may cause food poisoning. Potentially hazardous bacterial spores can survive the sous vide cooking process. Food must be cooled quickly to minimise the time the food is spent at temperatures at which these spores can grow and potentially produce food poisonous toxins. Sous vide food must be stored at 5 °C or below to prevent heat resistant bacterial spores in the food from growing. Do not exceed storage periods of longer than five days.
- Remember: All cooked food to be stored chilled must be cooled from 60 °C (or less) to 21 °C within two hours, and from 21 °C to 5 °C within a further four hours; a total of six hours.
- Sous vide food must be stored at 5 °C or below to prevent heat resistant bacterial spores in the food from growing. Do not exceed storage periods of longer than 5 days. Safe cooling stages for food.

Safe cooling stages for food



Food handling practices

#6 Sous vide

What is sous vide?

What is sous vide cooking?

Sous vide is French for 'under vacuum'. Sous vide foods are foods that are cooked under controlled conditions of temperature and time inside sealed packages in water baths or steam ovens. This method of cookery can produce food with different characteristics to conventional cooking methods.

Note: The term 'sous vide' in this template refers to foods that are:

- vacuum packed or similarly sealed to expel air prior to cooking, and are cooked by immersing in hot water or steam
- are cooked at lower temperatures than other common cooking methods, but for a time period
- sufficient to produce safe food
- cooked safely to kill potentially hazardous bacteria prior to consumption.

Why is sous ide cooking different to conventional cooking?

Sous vide food must be cooked using a time and temperature combination that results in safe food. Whilst cooking food to a core temperature of 75 °C or above kills food poisoning bacteria, cooking at lower temperatures and for a longer time can also have the same effect, but it is critical that it is done correctly to ensure safe food is produced.

This supplement is for businesses cooking high-risk food using the sous vide method, following the time and temperature parameters set out in this document. If you plan to cook food beyond these parameters, such as shortening or extending cooking time or lowering cooking temperature, this template is not suitable.

You must carefully monitor food cooked using the sous vide method to ensure it is safe to consume. **Food must not be held at 60 °C or below for longer than six hours**, including the food heating up to cooking temperature time and cooking time, as the risk of *Clostridium perfringens* spores germinating and producing toxins is increased. These bacterial toxins are not destroyed by further cooking and can cause food poisoning.

Equipment

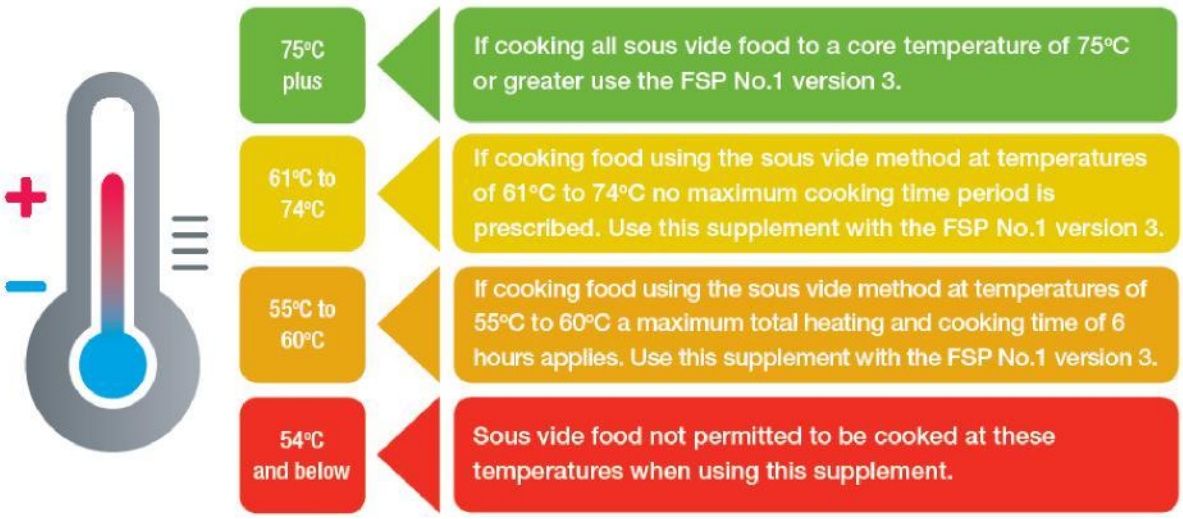
The equipment used must be suitable for producing safe food using the sous vide method.

You must use a calibrated probe thermometer accurate to at least +/-1 °C to check the temperature of the food when required.

Cooking temperature rules using the sous vide method

Food handling practices

#6 Sous vide

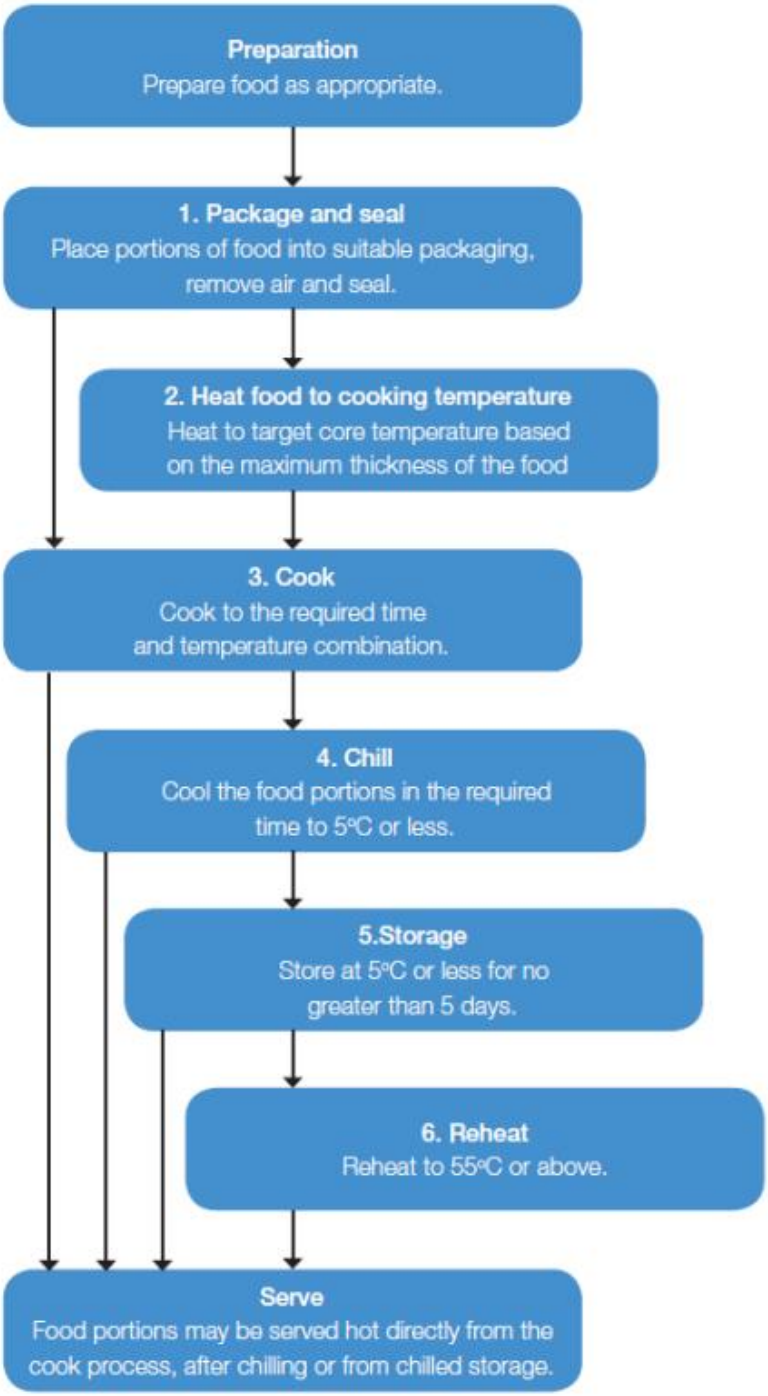


Sous vide process

The following flowchart outlines the basic sous vide process. There are several ways to produce food using the sous vide method.

Food handling practices

#6 Sous vide



Food handling practices

#6 Sous vide

Tips

Use high quality heat-stable food-safe packaging materials.

- Vacuum seal the food: Vacuum sealing removes air from the package allowing efficient heat transfer and prevents the pouches from floating which can lead to uneven heat penetration.
- Clean the vacuum sealing machine after each batch of food – it can be a source of cross-contamination of food during sealing.
- Use thin portions of food so heating and cooling is rapid, as larger, thicker portions will take a longer time for the core of the food to reach the required temperature. Table 2 provides a guide for the time it takes different thicknesses of food to reach the required core temperature.
- The number and temperature of the portions added to the water-bath will initially reduce the water temperature.
- Ensure all sealed packages are submerged and receive adequate heat.
- Circulating water baths heat food portions uniformly. Convection steam ovens may not heat the food portions uniformly. Make sure your equipment works properly to produce safe food.
- When measuring the temperature of the food use an accurate, calibrated and sanitised probe thermometer. It can be inserted through closed cell self-sealing tape or by a pack-connected thermocouple thermometer.
- Self-sealing tape can be used to maintain the vacuum when checking the core temperature of food. This will avoid food wastage when monitoring temperatures.
- If using the temperature gauge of the equipment or the temperature of the water between cooking verification runs, regularly check a sample of food to ensure the core of the food is reaching the required precise cooking temperature.
- Replace the water in the water-bath between uses to prevent the risk of cross contamination.
- Calibrate all equipment that you use for sous vide regularly, as sous vide relies on precise and accurate time and temperature readings. Keep a record of the calibration results for your thermometer and timer.
- Use an ice slurry (half ice, half water) or a blast chiller to chill the food rapidly.
- When alcohol is used as an ingredient it may cause the sealed pouch to balloon and float which will prevent the heat from penetrating the food properly.
- Ensure the temperature and processing time meets the requirements in this supplement rather than referring to equipment manuals and other sources for recipes.
- Reheating or finishing food may include rapid processes other than sous vide, such as pan sear, grill, barbeque, braise or roast.
- Label cooked sous vide portions with food details and shelf life dates to ensure safe and efficient stock control.
- The maximum shelf life of cooked sous vide food portions must not exceed 5 days when stored at refrigerated temperatures 5 °C or less.

Food handling practices

#6 Sous vide

This will guide you on what method to use

Category 1

Foods other than whole muscle red meats or seafood that must be cooked correctly to be safe to consume.

Foods that must be cooked correctly to be safe to consume include:

- minced, diced or sliced meat, terrines or pates
- deboned, stuffed, formed or rolled meat or other processes where bacteria may be in the centre of a formed meat piece
- mechanically or needle-tenderised meat, or other similar processes where potentially hazardous bacteria may have been moved or pushed into the interior of the meat by the tenderising process
- offal, such as tripe, kidney, liver or brains from any animal
- chicken, duck, quail or turkey meat.

Note: It does not include foods that are safe to consume uncooked. Follow the safe food practices in your food safety program for foods such as diced vegetables, dairy foods and egg products.

Use Table 2 in this supplement to work out the heating time required to bring the food up to cooking temperature based on the maximum thickness of the food. If you follow a procedure for this menu item, make sure the thickness of the food is consistent. Once the required time has been met for heating up, start the cooking stage.

Use Table 3 in this supplement to determine the minimum cooking time. Check that the core of the food is held at the specified cooking temperature for the required time. This is important to ensure any potentially hazardous bacteria in the food are destroyed.

Category 2

Whole muscle red meats or seafood.

It is an intact piece of red meat muscle from an animal, or an intact piece of seafood. For example, a T-bone or sirloin steak, kangaroo, wallaby or emu fillet, a leg of lamb, lamb shank, pork fillet or seafood such as a scallop or fillet of fish.

Use Table 3 in this supplement to work out the minimum cooking time the food must be cooked for. This is important to ensure any potentially hazardous bacteria on the surface of the food are destroyed. For this category only, the food does not need to cook through to the core.

Table 2: Heating time for different thicknesses: Category 1 foods

Use this table for Category 1 foods to work out the heating time prior to starting to cook. The thickest part of the food must be used when referring to this table.

Food handling practices

#6 Sous vide

Thickness time

0.5cm	5 minutes
1cm	19 minutes
2cm	50 minutes
3cm	90 minutes (1hr 30min)
4cm	150 minutes (2hr 30min)
5cm	210 minutes (3hr 30min)
6cm	285 minutes (4hr 45 min)

Table 3: Cooking temperature and time: Category 1 and 2 foods

Use this table to work out the cooking time for the food item (after the heating up time is completed from Table 2, if it is a Category 1 food).

Cook Temperature	Minimum Time
55°C	*200 minutes (3hr 20min)
56°C	*147 minutes (2hr 27min)
57°C	*109 minutes (1hr 49min)
58°C	*80 minutes (1hr 20min)
59°C	*59 minutes
60°C	*44 minutes

***Total heating and cooking time must not exceed 6 hours (360 minutes) when cooking temperatures below 60 °C are used.**

61 °C	32 minutes
62 °C	24 minutes
63 °C	18 minutes
64 °C	13 minutes
65 °C	10 minutes
66 °C	7 minutes
67 °C	5 minutes
68 °C	4 minutes
69 °C	3 minutes
70 °C	2 minutes
71 °C	1 minute 30 seconds
72 °C	1 minute 5 seconds
73 °C	48 seconds
74 °C	36 seconds
75 °C	26 seconds:

Food handling practices

#7 Cooling and freezing food

Issues

1. Growth of food poisoning bacteria if food takes too long to cool.

Cooling food	
What can I do?	• Reduce the temperature of cooked food to below 5 °C as quickly as possible after cooking. • Within two hours, place cooked food in cold storage. A longer initial cooling time may be required for large whole meat joints – more than 2.5kg – to ensure that they do not increase the temperature of the cold storage unit when refrigerated. • Cool high-risk food from 60 °C to 21 °C within two hours. Once food has cooled to 21 °C, put it in the refrigerator or freezer and cool to 5°C or colder within the next four hours. • When food stops giving off steam it can be placed in cold storage.
How can I check?	• Use a clean and sanitised probe thermometer to check the temperature at the centre of food. • Use it every hour or so to measure the drop in temperature over time.
What if it is not right?	• If food is above 21 °C after two hours place on top of an ice tray. Where possible, reduce the volume of the food to assist with faster cooling. Monitor the temperature drop and ensure safe handling. Throw away high-risk food if the cooling time from 60 °C to 21 °C exceeds two hours, or exceeds four hours to 5 °C. • Improve cooling procedures and facilities.

Food handling practices

#7 Cooling and freezing food

2. Cross-contamination of cooked food with food poisoning bacteria from raw food or other non-food contaminants or allergenic materials.

Cross-contamination of cooked food	
What can I do?	• Cool food in clean food grade containers in an area away from raw food or other sources of contamination. • Place food over an ice tray to cool and protect from contamination. Food handlers must follow good standards of personal hygiene to avoid contamination – especially if food must be handled while still warm.
How can I check?	• Check that cooling food is not at risk of contamination.
What if it is not right?	• Throw out any cooled food you suspect has been contaminated. If non-allergenic food may be contaminated with an allergen, make sure that it is not used in the preparation of food that is intended to be allergen free. • If food may include allergens, refer to **Support program 1: Food allergens, intolerances and general information for customers** about making information available to customers and staff.

Food handling practices

#7 Cooling and freezing food

What are the risks?

- Cooling hot food too slowly can allow bacteria to multiply and cause food poisoning. To avoid this, high-risk food must be cooled from 60°C to 21°C within two hours and then cooled to 5 °C or colder within the next four hours.

Food handling practices

#7 Cooling and freezing food

2 hour/4 hour rule

The 2 hour/4 hour rule uses time and temperature control to keep food safe during preparation. If you use this rule in your business, refer to **Support program 8: Time control** for more details.

Food handling practices

#7 Cooling and freezing food

Tips

- Remove cooked food from the heat source and allow it to stand until the temperature drops to approximately 60 °C.
- Spread food out to cool it faster or divide it into smaller batches in shallow containers (less than 10 cm deep).
- If you have access to a blast chiller, use it to chill hot foods quickly and safely.
- Stir hot liquid while it is being chilled.
- Place containers of hot food in cold water or an ice bath to cool the contents more quickly. Move hot food to a cooler area where it will cool more quickly.
- Do not put hot food straight from the oven or stove into the refrigerator, coolroom or freezer because it can raise the temperature of other food and allow bacteria to grow.
- Label food that has been cooled and placed in covered containers, including the type of food and the time and date, before placing it in the refrigerator, coolroom or freezer.
- To find out more about storing food containing allergens and how you may help customers with questions, see <https://www.health.vic.gov.au/public-health/food-safety>.

Food handling practices

#8 Reheating prepared food

Issues

1. Food poisoning bacteria can survive if food is not properly reheated.

Reheating food	
What can I do?	• Reheat food thoroughly to kill food poisoning bacteria. • Always reheat food until it is hot (75 °C or hotter) all the way through. • Use cooking time and cooking equipment temperatures to achieve this. • Do not use bain-maries to reheat food. • Reheat according to the manufacturer's instructions. • Only reheat food once and discard any leftovers.

How can I check?	• Use a probe thermometer to regularly measure the temperature of the thickest part of the food.
	• Check that:
	  ○ reheated food is hot (steaming) all the way through
	  ○ liquids bubble rapidly when stirred.

What if it is not right?	• Increase the reheating time or temperature. • Reduce the portion size of food being reheated. • Review your reheating method. • Adjust recipe cards or equipment settings if necessary. • Repair or replace equipment.

Food handling practices

#8 Reheating prepared food

2. Cross-contamination of food through poor personal hygiene or from raw food to reheated food, or allergenic to non-allergenic foods.

Cross-contamination of food	
What can I do?	• Refer to **Food handling practice 4: Preparation** to limit risks of contamination. • Protect food from cross-contamination by using clean utensils and equipment during handling.
How can I check?	• Regularly look at how food is being reheated.
What if it is not right?	• Throw away food if you suspect it has been contaminated. • If non-allergenic food may be contaminated with an allergen, make sure that it is not used in the preparation of food that is intended to be allergen free. • If food may include allergens, refer to **Support 1 Food allergens, intolerances and general information for customers** about making information available to customers and staff.

Food handling practices

#8 Reheating prepared food

What are the risks?

- Reheating food safely means cooking it again, not just warming it up.
- Bacteria introduced after cooking may multiply if reheating is inadequate, making the food unsafe.
- Bacteria can be transferred to food from unwashed equipment, utensils and hands.

Food handling practices

#8 Reheating prepared food

Tips

- Where possible, stir or mix food to make sure there are no cold spots, and the food is evenly reheated.
- Preheat equipment such as ovens and grills before use. If food takes longer to reheat than the recommended reheating times in recipes or the manufacturer's instructions it may not be long enough to kill bacteria.
- If you are reheating food in a microwave, follow the manufacturer's instructions, including advice on standing and stirring. Manufacturers have tested their instructions to make sure that foods will be properly reheated. When food is microwaved, it can be very hot at the edges and still be cold in the centre. Regular stirring helps to prevent this.

Food handling practices

#9 Serving and displaying cold food

Issues

1. Growth of food poisoning bacteria in ready-to-eat food if cold holding units break down, are not turned on, or are not at the correct temperature.

Temperature control	
What can I do?	• Keep cold food at 5 °C or below.
How can I check?	• Measure the core temperature of food in display units by measuring its core or surface temperatures. Record results in **Record 2: My temperature checks of food in cold or hot storage**. Check your completed food temperature records (**Record 2**) to ensure that safe food temperatures are maintained.
What if it is not right?	• If the temperature of food is greater than 5 °C for: o less than two hours, use the food immediately or return to o refrigerated storage o more than two hours, and less than four hours, use the food o immediately o more than four hours, discard the food. • Adjust equipment if necessary and discuss with your staff.

Food handling practices

#9 Serving and displaying cold food

2. Contamination of displayed food by staff handling practices.

Cross-contamination from food handlers	
What can I do?	• Use separate display units or physical barriers between raw and cooked or ready-to-eat foods. • Make sure that staff use a different serving tool or utensil for each food item or dish. • Make sure the display unit, utensils and cloths are clean and • sanitised before use. • Do not reuse single-use items after use, such as paper towels, cups and plates. • Use clean, dry labels on food.
How can I check?	• Check that food display units are being used correctly. • Check that utensils are being used correctly. • Inspect equipment, utensils and cloths regularly to make sure they are clean and sanitised. • Check that single-use items are thrown out after use. • Check labels.
What if it is not right?	• Ensure staff know how to keep raw and cooked or ready-to-eat foods separate. • Ensure utensils are used correctly. • Replace used or dirty equipment with clean equipment, utensils and cloths. • Repair or replace equipment that cannot be properly cleaned. • Throw out food if you are not confident that it is safe. • Remove food that may have been contaminated immediately and discard.

Food handling practices

#9 Serving and displaying cold food

3. Cross contamination of food with food poisoning bacteria.

Cross-contamination of food	
What can I do?	• Replace food displays with completely fresh batches of food. Never mix old food with fresh batches of food (for example, sandwich ingredients, salads, pizza toppings or foods containing uncooked egg).
How can I check?	• Check that batches of food are not mixed.
What if it is not right?	• Ensure staff know not to mix batches of food. Throw food out if you suspect it may be unsafe.

Food handling practices

#9 Serving and displaying cold food

4. Food is contaminated by allergens, and a person who is allergic becomes sick.

Cross-contamination from allergens	
What can I do?	• Ensure that unpackaged and ready-to-eat foods containing known allergens are stored, processed and displayed separate from other foods. • Use separate utensils. • Train staff so they know how to handle and serve food in a way that prevents foods becoming contaminated with allergens. • Ensure accurate information about ingredients is available for customers with allergies or food intolerances.
How can I check?	• Check that staff are handling food correctly. • Check that displays and serving of food prevent cross-contamination of foods with allergens by staff. • Check that allergen information is either displayed with food, or that staff can answer customer queries about ingredients.
What if it is not right?	• Train staff. • If non-allergenic food may be contaminated with an allergen, make sure that it is not used in the preparation of food that is intended to be allergen free. • If ready-to-eat food served at the premises may include allergens, make sure that information about the allergens is displayed with the food or is available on request.

Food handling practices

#9 Serving and displaying cold food

Required records

My temperature checks of food in cold or hot storage

To check

The temperature of high risk food.

How often

Check and record the temperature at least once a day of a high-risk food that is kept in each freezer, refrigerator and cool room.

Food handling practices

#9 Serving and displaying cold food

What are the risks?

The display of food can be a high-risk practice. Food can become contaminated in a number of ways.

- Food poisoning bacteria can multiply if food spends too long in the temperature danger zone of 5 °C to 60 °C.
- The mixing of new and old batches of food can spread food poisoning bacteria.
- Foreign objects that fall into, or come into contact with, uncovered food may contaminate the food. Poor food handling can contaminate food.
- Cross-contamination can occur if raw and ready-to-eat foods are stored in the same area.
- Cross-contamination can occur if utensils, surfaces or equipment come into contact with both allergenic and non-allergenic foods.
- If high-risk cold food is stored near lights in the cold display unit, it may become too warm, which may cause food poisoning bacteria to multiply.

Food handling practices

#9 Serving and displaying cold food

Tips

- Inform suppliers that they are required by law to comply with the *Australia New Zealand Food Standards Code – labelling and other information requirements*, including *Mandatory warning and advisory statements and declarations*. All packaged food must be labelled according to the Code. For more information, check <http://www.foodstandards.gov.au>.
- Pre-cool display units to 5 °C or cooler before use.
- Don't prepare food too far ahead of when it will be served.
- If using remote temperature monitoring IT systems, refer to the Department of Health and Human Services' *Guide to remote monitoring of temperatures in food storage units* for advice on how to check and monitor the operation of this system. See <https://www.health.vic.gov.au/public-health/food-safety>.

Food handling practices

#10 Serving and displaying hot food

Issues

1. Food poisoning bacteria can grow over time if hot holding units are not set to the correct temperature, are not turned on, or break down.

Temperature control	
What can I do?	• Serve reheated food as quickly as possible – or maintain it at 60 °C or hotter. • Check that hot holding equipment is hot before use and use a temperature setting that will keep the food at 60 °C or hotter.
How can I check?	• Measure the temperature regularly (at least once a day) in **Record 2: My temperature checks of food in hot or cold storage.** • Check your completed food temperature records (**Record 2**) to ensure that safe food temperatures are maintained.
What if it is not right?	• If food sits at less than 60 °C for less than two hours: o reheat it to 75 °C or hotter, serve immediately and discard any o leftovers, or o reheat it to 75 °C or hotter, maintain at 60 °C or above during o service and discard any leftovers, or o cool it to 5 °C or colder and refrigerate it. Remember you should only reheat food once. o If the temperature of the food is less than 60 °C for more than two hours, discard it. o Adjust equipment if necessary and discuss with your staff.

Food handling practices

#10 Serving and displaying hot food

2. Contamination of displayed food by staff

Cross-contamination from food handlers	
What can I do?	• Use separate display units or physical barriers between raw and cooked or ready-to-eat foods. • Make sure that staff use a different serving tool or utensil for each food item or dish. • Make sure the display unit, utensils and cloths are clean and sanitised before use. • Do not re-use single-use items after use, such as paper towels. Use clean, dry labels on food.
How can I check?	• Check that food display units are being used correctly. • Check that utensils are being used correctly. • Inspect equipment, utensils and cloths regularly to make sure they are clean and sanitised. • Check that single-use items are thrown out after use. • Check labels.
What if it is not right?	• Ensure staff know how to keep raw and cooked, or ready-to-eat, foods separate. • Ensure utensils are used correctly. • Replace used or dirty equipment with clean equipment, utensils and cloths. • Repair or replace equipment that cannot be properly cleaned. • Throw out food if you are not confident that it is safe. • Remove food that may have been contaminated immediately and discard.

Food handling practices

#10 Serving and displaying hot food

3. Cross-contamination of food with food poisoning bacteria.

Cross-contamination of food	
What can I do?	• Replace food displays with completely fresh batches of food. • Never mix old food with fresh batches of food (for example, sandwich ingredients, salads, pizza toppings or foods containing uncooked egg).
How can I check?	• Check that batches of food are not mixed.
What if it is not right?	• Throw out unused self-serve food. • Ensure staff know not to reuse it. • Ensure staff know not to mix batches of food. • Throw food out if you suspect it may be unsafe.

Food handling practices

#10 Serving and displaying hot food

4. Food is contaminated by allergens, and a person who is allergic becomes sick.

Cross-contamination from allergens	
What can I do?	• Ensure that unpackaged and ready-to-eat foods containing known allergens are stored, processed and displayed separate from other foods. • Use separate utensils. • Train staff so they know how to handle and serve food in a way that prevents foods becoming contaminated with allergens. • Ensure accurate information about ingredients is available for customers with allergies or food intolerances.
How can I check?	• Check that staff are handling food correctly. • Check that displays and serving of food prevent cross-contamination of foods with allergens by staff or customers. • Check that self-serve areas are actively supervised. • Check that allergen information is either displayed with food, or that staff can answer customer questions about ingredients.
What if it is not right?	• Train staff. • If non-allergenic food may be contaminated with an allergen, make sure that it is not used in the preparation of food that is intended to be allergen free. • If ready-to-eat food served at the premises may include allergens, make sure that information about the allergens is displayed with the food or is available on request.

Food handling practices

#10 Serving and displaying hot food

Required records

My temperature checks of food in cold or hot storage

To check

The temperature of high-risk food.

How often

Check and record the temperature at least once a day of a high-risk food that is kept in each freezer, refrigerator and cool room.

Food handling practices

#10 Serving and displaying hot food

What are the risks?

- The display of food can be a high-risk practice. Food can become contaminated in a number of ways: Food poisoning bacteria can multiply if food spends too long in the temperature danger zone of 5 °C to 60 °C.
- The mixing of new and old batches of food can spread food poisoning bacteria.
- Foreign objects that fall into, or come into contact with, uncovered food may contaminate the food. Poor food handling can contaminate food.
- Cross-contamination can occur if utensils, surfaces or equipment come into contact with both allergenic and non-allergenic foods.
- If hot food is not fully cooked before being placed in hot holding units, food poisoning bacteria will increase in large numbers and may cause food poisoning.
- If hot food is held at lower than 60 °C, bacteria can multiply and cause food poisoning. Bain-maries or hot holding units are designed to keep hot food hot but must not be used for reheating food as they cannot reach 75 °C within one hour. If a bain-marie tray is overloaded, the temperature of the food may not be maintained at 60 °C or hotter.

Food handling practices

#10 Serving and displaying hot food

Tips

- Inform suppliers that they are required by law to comply with the *Australia New Zealand Food Standards Code – labelling and other information requirements*, including *Mandatory warning and advisory statements and declarations*. All packaged food must be labelled according to the Code. For more information, check <http://www.foodstandards.gov.au>.
- Do not overload bain-maries.
- Review the amount of food held in bain-maries or call a technician if they cannot maintain food at 60 °C or hotter.

Food handling practices

#11 Self-service food

Issues

1. Contamination of self-service food by staff or customers.

Display units	
What can I do?	• Use separate display units or physical barriers between raw and cooked or ready-to-eat foods. • Make sure food is protected and/or covered where appropriate (for example, sneeze guards or covers). • If food is packaged, make sure the packaging is not damaged or broken. • Use clean, dry labels on food and garnishes.
How can I check?	• Check that food display units are being used correctly. • Check that food is being protected. • Check packaging. • Check labels and garnishes.
What if it is not right?	• Ensure staff know how to keep raw and cooked or ready-to-eat foods separate. • Throw out food if you are not confident that it is safe. • Remove food that may have been contaminated immediately and discard.

Food handling practices

#11 Self-service food

Cross-contamination of food	
What can I do?	• Make sure that staff and customers use a different serving tool or utensil for each food item or dish. • Make sure the display unit, utensils and cloths are clean and sanitised before use. • Replace soiled cloths and serving utensils with clean ones regularly during service. • Do not re-use single-use items after use, including straws, paper towels, cups and plates. • Have trained staff supervise food areas so they can act immediately if food is contaminated.
How can I check?	• Check that utensils are being used correctly. • Inspect equipment, utensils and cloths regularly to make sure they are clean and sanitised. • Check that single-use items are thrown out after use. • Check staff are monitoring the self-service food closely.
What if it is not right?	• Ensure utensils are used correctly. • Replace used or dirty equipment with clean equipment, utensils and cloths. • Repair or replace equipment that cannot be properly cleaned. • Throw out food if you are not confident that it is safe. • Remove food that may have been contaminated immediately and discard.

Food handling practices

#11 Self-service food

2. Cross contamination of food with food poisoning bacteria.

Cross-contamination of food	
What can I do?	• Never reuse self-serve, high-risk food that is either cooked or ready-to-eat. • Replace food displays with completely fresh batches of food. • Never mix old food with fresh batches of food (for example, sandwich ingredients, salads, pizza toppings or foods containing uncooked egg).
How can I check?	• Check that leftover self-serve food is not reused. • Check that batches of food are not mixed.
What if it is not right?	• Throw out unused self-serve food. Ensure staff know not to reuse it. • Ensure staff know not to mix batches of food. Throw food out if you suspect it may be unsafe.

Food handling practices

#11 Self-service food

3. Food is contaminated by allergens, and a person who is allergic becomes sick.

Cross-contamination from allergens	
What can I do?	• Ensure that unpackaged and ready-to-eat foods containing known allergens displayed separate from other foods. • Use separate utensils. • Train staff so they know how to handle and serve food in a way that prevents foods becoming contaminated with allergens. • Ensure accurate information about ingredients is available for customers with allergies or food intolerances.
How can I check?	• Check that staff are handling food correctly. • Check that displays and serving of food prevent cross-contamination of foods with allergens by staff or customers. • Check that self-serve areas are actively supervised. • Check that allergen information is either displayed with food, or that staff can answer customer queries about ingredients.
What if it is not right?	• Train your staff. • If non-allergenic food may be contaminated with an allergen, make sure that it is not used in the preparation of food that is intended to be allergen free. • If ready-to-eat food served at the premises may include allergens, make sure that information about the allergens is displayed with the food or is available on request.

Food handling practices

#11 Self-service food

What are the risks?

- The self-service of food can be a high-risk practice since untrained people may have access to the food.
- Food can become contaminated in a number of ways:
  - food poisoning bacteria can multiply if food spends too long in the temperature danger zone of 5 °C to 60 °C.
  - the mixing of new and old batches of food can spread food poisoning bacteria
  - foreign objects that fall into, or come into contact with, uncovered food may contaminate the food
  - poor food handling can contaminate food
  - customers may contaminate food
  - cross-contamination can occur if raw and ready-to-eat foods are stored in the same area
  - cross-contamination can occur if utensils, surfaces or equipment come into contact with both allergenic and non-allergenic foods.

Food handling practices

#11 Self-service food

Tips

Inform suppliers that they are required by law to comply with the *Australia New Zealand Food Standards Code – labelling and other information requirements*, including *Mandatory warning and advisory statements and declarations*. All packaged food must be labelled according to the Code. For more information, check <http://www.foodstandards.gov.au>.

Food handling practices

#12 Packaging

Issues

1. Contamination of food from inappropriate or damaged containers or packaging.

Safe packaging	
What can I do?	• Store and package food in food grade containers or packaging that is suitable for the food and for any processes that follow (for example, refrigeration, freezing or microwaving). • Follow the manufacturer's instructions for use.
How can I check?	• Regularly check that containers and packaging are intact and undamaged. • Check that the label and product information is accurate.
What if it is not right?	• Throw out food that has been contaminated. • Repackage foods appropriately.

Food handling practices

#12 Packaging

2. Cross-contamination of food with food poisoning bacteria or foreign matter or allergens in the packaging area or by equipment.

Cross-contamination of food	
What can I do?	• Use clean food grade containers and equipment. • Clean and sanitise the food packaging area and machinery before starting work and make sure it is free from things that could contaminate food such as dirt, dust, insects, glass, metal and plastic. • Maintain food packaging machinery with food-grade lubricants and make sure these products do not contaminate food.
How can I check?	• Inspect the quality and function of packaging areas, vehicles and equipment. • Inspect premises and vehicles to see whether different foods are stored separately and in food-grade containers.
What if it is not right?	• Throw out any food that may be unsafe. • Improve vehicles, containers, packaging, equipment, and procedures. • If non-allergenic food may be contaminated with an allergen, make sure that it is not used in the preparation of food that is intended to be allergen-free. • If food may include allergens, refer to **Support program 1: Food allergens, intolerances and general information for customers** regarding making information available to staff and customers.

Food handling practices

#12 Packaging

3. Misleading or causing harm to customers due to incorrect labels or information.

Labelling	
What can I do?	• The *Australia New Zealand Food Standards Code* applies in different ways, depending on how food is handled and sold on site. Correctly label any pre-packaged food that under the Code that must bear a label and meet requirements. For example, any - o pre-packaged food you sell in the original packaging that you o received it in from another food business, or o food which you made and packaged at another site. • For other food, make sure the required information is available as set out in the Code. • For more information, go to the **Support program 1: Food allergens, intolerances and general information for customers**.
How can I check?	• Check that practices and labels meet the requirements that apply to your business. Review regularly, especially for new foods.
What if it is not right?	• Change practices and labels so that they comply with the Code.

Food handling practices

#12 Packaging

What are the risks?

- Sound and reliable packaging is important because:
  - damaged or faulty packaging can let pests into food
  - some foods react adversely with, and can be contaminated by, certain types of packaging material.

Food handling practices

#12 Packaging

Useful links

Food Safety Australia New Zealand (FSANZ) food labelling page: <www.foodstandards.gov.au/consumer/labelling/>.

Australia New Zealand Food Standards Code. Part 1.2 Labelling and other information requirements <www.foodstandards.gov.au/code>. The Code has several requirements relating to food packaging. Standard 1.4.3 requires that articles and materials that may be placed in contact with food are not likely to cause bodily harm, distress or discomfort. The Code, in Standard 1.4.1, also sets maximum levels for some chemical contaminants that may be present in food as a result of migration from packaging materials.

Food handling practices

#12 Packaging

Tips

Store packaging materials, in their original containers, if possible, in an area set aside for the purpose away from chemicals, allergens and other possible contaminants.

Food handling practices

#13 Transporting food

Issues

1. Contamination of food with food poisoning bacteria, non-food contaminants or allergens during transport.

Cross-contamination while transporting food	
What can I do?	• Load vehicles so that different foods remain separate and cannot be mixed. • Minimise the time food is in transit. • Only transport food in vehicles that are designed for food transport. • Only prepare food in vehicles set up for food preparation. • Ensure vehicles used for transport, preparation or sale of food are cleaned regularly (this should be included in your cleaning arrangements). • Cover all food with food grade covers. (If you use tea towels, make sure they are only used to cover food – not for cleaning – as this can contaminate the food). • Keep cooked or ready-to-eat food separate from raw food.
How can I check?	• Check vehicles and containers. • Check travel times.
What if it is not right?	• Dispose of any food that you suspect has become contaminated. • If non-allergenic food may be contaminated with an allergen, make sure that it is not used in the preparation of food that is intended to be allergen-free. • If food may include allergens, refer to **Support 1 Food allergens, intolerances and general information for customers** about making information available to staff and customers.

Food handling practices

#13 Transporting food

2. Growth of food poisoning bacteria from food being transported in the temperature danger zone 5 °C to 60 °C.

Temperature control	
What can I do?	• Use vehicles and equipment capable of maintaining food within required temperatures. • Ensure staff are skilled in transporting food appropriately and safely. • Minimise the time food is in transit. • If the food transport vehicle does not have a refrigeration system, use insulated boxes to maintain food that requires temperature control at safe temperatures. Don't pack this food into the vehicle until it is time to deliver it. Ensure that the food is delivered as quickly as possible.
How can I check?	• Measure the temperature and quality of food at dispatch and delivery. • Inspect the quality and function of vehicles and equipment.
What if it is not right?	• Throw out any food that has spent too long in the temperature danger zone of 5°C to 60°C. • Improve vehicles, equipment and procedures.

Food handling practices

#13 Transporting food

What are the risks?

- Transportation exposes food to handing and time away from controlled storage. Risks include:
- Packaging may be damaged during transportation allowing food to become contaminated.
- Transporting high-risk food from a supplier to your premises or to another site without proper temperature control can allow bacteria to multiply during transit.
- The business or customer may not accept high-risk food unless you can demonstrate that the time food has been in the temperature danger zone of 5 °C to 60 °C.
- Food poisoning bacteria can be transferred from raw food to cooked or ready-to-eat food if transported incorrectly.

Food handling practices

#13 Transporting food

Tips

If using remote IT monitoring equipment refer to the Department of Health's *Guide to remote monitoring of temperatures in food storage units* for advice on how to check and monitor the operation of this system. Access the guide at <https://www.health.vic.gov.au/food-safety/remote-temperature-monitoring-of-food>.

Food handling practices

#14 Food vans, stalls, events and off-site catering

⚠ Issues

1. Growth of food poisoning bacteria from food being in the temperature danger zone of 5 °C to 60 °C while in transit and/or at the event or function.

Temperature control	
What can I do?	• Use vehicles and equipment capable of maintaining food within the required temperatures. • Minimise the time food is in transit. • Organise a backup power supply in the event that power supply is interrupted. • Make sure equipment is maintained.
How can I check?	• Measure the temperature and quality of food at dispatch and delivery to the venue. • Inspect the quality and function of vehicles and equipment. • Inspect equipment beforehand and ensure availability of any backup equipment.
What if it is not right?	• Throw out any food that may have been contaminated or if safe temperatures have not been maintained. • Improve vehicles, equipment and procedures. • Repair or replace equipment that breaks down.

Food handling practices

#14 Food vans, stalls, events and off-site catering

2. Cross-contamination of food with food poisoning bacteria.

Cross-contamination of food	
What can I do?	• When transporting food, keep raw foods in separate sealed containers and keep cold where necessary. • Use clean food grade containers and equipment. • Ensure that all food is securely and appropriately stored, is protected from pests and contamination and, where possible, cannot be tampered with. • Set up your stall, van or catering so that your food products and operations are protected from contamination by guests, the public, the environment, dust, rain, pests, clothing and other non-food items. • Ensure cleaning agents and equipment are available at wash stations, all work surfaces and utensils are cleaned and sanitised and products and workflow move in one direction – from raw to cooked to serving area.
How can I check?	• Check that all food arrives intact and that no spillages, breakages or contamination have occurred in the transport vehicles or packages. • Check that all equipment is clean and working properly. • Check that the set up prevents cross-contamination. • Check that rubbish and waste is removed from the site at regular intervals.
What if it is not right?	• Throw out any food that may have been contaminated. • Clean and improve vehicles, equipment and procedures.

Food handling practices

#14 Food vans, stalls, events and off-site catering

3. Growth of food poisoning bacteria when food is not cooled appropriately.

Cooling food	
What can I do?	• When you transport food to the venue, cool it as much as possible beforehand. • If you prepare all food at the venue, or if you are catering at a large event, make sure food is cooled quickly and safely and not left in the temperature danger zone of 5 °C to 60 °C beyond the safe period.
How can I check?	• Inspect food to see whether it has been thoroughly cooled before being transported. • Inspect food prepared earlier to see whether it has been thoroughly cooled. • Make sure cooled food is stored appropriately and made ready for later final preparation and serving.
What if it is not right?	• Throw out any food that may have not been cooled appropriately.

Food handling practices

#14 Food vans, stalls, events and off-site catering

4. Growth of bacteria in dirty water.

Clean water	
What can I do?	• Ensure an adequate and reliable supply of drinking water is available at the stall for hand washing and that a separate supply is available for equipment washing. • If safe drinking water is not available, use quality bottled water or an alternative, safe, potable water supply.
How can I check?	• Ask your local council about the quality and volume of the water supply at the location. Inspect alternative water supplies to ensure they will be of guaranteed quality.
What if it is not right?	• Use bottled water or water of guaranteed quality.

Food handling practices

#14 Food vans, stalls, events and off-site catering

What are the risks?

- When you are catering or selling in an open environment, the temperature and the weather can be unpredictable and sources of contamination numerous.
- Waste materials can attract pests and increase the risk of food contamination.
- Food can be contaminated by pests if storage facilities are not provided or are inadequate.
- If using remote monitoring equipment refer to the Department of Health and Human Services' *Guide to remote monitoring of temperatures in food storage units* for advice on how to check and monitor the operation of this system. Access the guide at <https://www.health.vic.gov.au/food-safety/remote-temperature-monitoring-of-food>

Food handling practices

#14 Food vans, stalls, events and off-site catering

About this section

The food vans, stalls, events and off-site catering section applies if you prepare, serve or sell unpackaged high-risk food as a class 2 premises:

- at festivals, street festivals, markets or food exhibitions
- from a portable stall, tent or marquee
- from a van
- as off-site catering.

It applies whether you:

- prepare all of the food at these sites, or
- part prepare food at a premises such as a café, and reheat and serve that food at a stall, tent, marquee or van; or
- are a caterer who part prepares food at your main kitchen and serves it off-site at a variety of functions.

You must:

- Comply with the advice in the previous sections of this document about how food is handled at the van, stall, event or catering activity, and also beforehand. Use all Records relevant to your operations.
- If Records 2, 3 or 4 apply to your van, stall, event or catering, they will need to be completed when this activity is being conducted, use this section as it contains extra information to ensure food is safe.

Food handling practices

#14 Food vans, stalls, events and off-site catering

Tips

Planning before the activity

These steps will ensure you meet the general obligations described in this food safety program template.
Research the venue:

- Ask the event organiser, market coordinator or catering client for details about what space or areas will be available to you to set up your stall, marquee or van, and what services and storage facilities are available, including cold frozen storage.
- Find out how many people or guests are expected.
- Decide what food you will serve or sell.
- If you plan to serve or sell any pre-packaged food, label the packaging according to the *Australia New Zealand Food Standards Code* (the Food Standards Code) before the event. In this way you will be able to provide customers or guests with accurate information about the food, especially regarding food allergens. Prepare any food labels you will need for food that will be on display.
- If operating at an outdoor venue that is open to the public, contact the environmental health officer at the council where the event will be held. Ask about their past experiences of the event or venue or ask other event participants about their experiences at the venue.
- Make plans for access to electricity, safe drinkable (potable) water, waste disposal, wastewater drainage, toilet facilities, hand washing, rubbish and waste removal and other facilities at the venue. Work out what access you will have to food storage facilities at the venue and how you will manage the security of these storage units on the day.
- Work out what additional food preparation you need to do beforehand (beyond your normal business preparation requirements) and how you will safely prepare food at the venue.
- If any of the food to be used is purchased from new suppliers, check that they are registered as food businesses with their local councils.
- Work out how you will set up hand washing and equipment washing areas with a hot water supply. Organise a kit that contains a temperature probe, cleaning agents and other necessary equipment. Hire anything you don't have. The goal is to ensure food will be stored, prepared, cooked and displayed at the venue in line with your food safety program.
- Check that you have additional copies of record sheets from this food safety program template to complete at the venue.
- Check that your staff know what records are required, how to fill them in and how to check temperatures.
- Inform staff about the instructions in your food safety program for keeping food safe when preparing food for the event.
- Inform staff about their primary contact if they need assistance on a food safety question at the venue – for example, the food safety supervisor, event coordinator, and hire equipment people. If staff are not familiar with working with food, show them how to handle food safely and keep their work areas clean.
- Train staff to handle inquiries about allergens.

Food handling practices

#14 Food vans, stalls, events and off-site catering

At the activity

- Brief staff about allergens in food being prepared so that they can give customers or guests comprehensive information about it.
- Check that all staff are familiar with your food safety program, their roles and responsibilities at the venue, and what to do if something goes wrong.
- To limit exposure of food to the environment, remove foods from the refrigerator, cool room or other cold storage only when needed.
- Keep an eye on the weather and conditions. If they change, make any necessary changes to protect your set-up and food from contamination.

Afterwards

- Review your operations to identify what worked well and what could be done better next time.

Food handling practices

#15 Safe water and food

Issues

1. Presence of high numbers of bacteria in water can contaminate food (including drinking water utensils used to handle food.

Safe water	
What can I do?	• Ensure adequate and reliable supply of drinking water. • Refer to **what are the risks** in this section about when potable water should be used. • Use water provided by authorised suppliers. • If a safe, potable water supply is not available, use quality bottled water or seek information or assistance on how to use non-potable water safely.
How can I check?	• Check the water suppliers have appropriate credentials. • Inspect alternative water supply to ensure it is of guaranteed quality.
What if it is not right?	• Note any problems with supply; contact the supplier if you need more information about the safety of the water. • Take action if water is known to be unsafe. • Note what action was taken. Alternatively, find a safe source or arrange for a registered water carter to bring safe water to your premises. • Use bottled water or water of guaranteed quality. • If water quality is poor, take measures to make the water safe or find out how this water may be used in the business. (See the **Tips** section).

Food handling practices

#15 Safe water and food

What are the risks?

Water that is untreated or polluted can cause serious disease and poisoning.

Victorian food laws require food businesses to use potable water for all activities that use water on the premises. If water is of a lower quality or is non-potable, it may be used if you can show that the safety of the food you produce is not affected.

Potable water

'Potable' water means water that is acceptable and safe for human consumption. Potable water must be used in a food business for:

- washing food and food ingredients
- cooking
- adding to food and drinks
- making ice
- cleaning of food contact surfaces
- cleaning food containers and utensils
- hand washing and personal hygiene.

Food handling practices

#15 Safe water and food

Tips

If you have any doubts about the quality of your water supply, contact your local council or check the following websites for information.

Private drinking water supply in food businesses

- Guidelines for safe water supply from private drinking water: <https://www.health.vic.gov.au/water/private-drinking-water>

Water Program

- The Water Program administers drinking water regulation: <https://www.health.vic.gov.au/public-health/water-quality-safety>

Water companies in your area

- Local water suppliers: <https://www.health.vic.gov.au/water/water-suppliers>

If your business is in a rural area you may need to check that your water supply is safe for use in a food business (that is, find out if the water is potable). Check with your local water company or local council for more information on what to do if the water is not potable.

Food handling practices

#16 Sushi preparation and display

Issues

1. Contamination of food by bacteria, chemicals or other non-food material during purchasing and receiving sushi.

Managing suppliers and receival of sushi	
What can I do?	• Only buy from reliable suppliers. • Request that pre-made sushi is made to a requested standard, such as outlined in this section, before accepting it from a supplier.
How can I check?	• Ask suppliers for information about their products or a copy of their record log. • Measure the temperature of all sushi deliveries to see whether they are below 15 °C.
What if it is not right?	• If the temperature of the sushi is above 15 °C when delivered, reject the delivery unless you have a predetermined arrangement with your supplier and can verify how long the sushi has been above 15 °C. Refer to **Food handling practice 1: Purchasing and receiving food** for more information.

Food handling practices

#16 Sushi preparation and display

2. Contamination during preparation.

Managing pH	
What can I do?	• For every one kilogram of rice, at least 110 ml of vinegar must be added. Sushi rice must have a pH of less than or equal to 4.0, sushi rice plus fillings should be pH less than or equal to 4.5. • Discard acidified sushi rice after eight hours. • Always use high-quality fillings and fresh fish free from contamination.
How can I check?	• Measure the pH of each batch sushi rice using a pH indicator or strip (litmus paper) or a pH meter. pH must be measured twice. Initially after mixing in vinegar and prior to assembling sushi. Record results in **Record 6. Sushi preparation**. • Measure the pH of sushi plus filling using a pH indicator or strip (litmus paper) or a pH meter.
What if it is not right?	• If the rice has a higher pH than 4.0, add more vinegar. • Increase the amount of vinegar per kilogram of rice. • Re-test the pH of the rice (via the rice slurry method – refer to in **Record 6 Sushi preparation**) until the correct pH is reached.

Food handling practices

#16 Sushi preparation and display

3. Contamination during display

Time and temperature	
What can I do?	• Always keep display units at 15 °C or cooler. • Ensure nori rolls are not on display at 5-15 °C for any longer than 12 hours. • Ensure nigiri pieces are not on display at 5-15 °C for any longer than eight hours.
How can I check?	• Inspect the temperature of display units • Monitor the time products spend on display, record the time products are put on display and removed from display in **Record 7: Sushi display time log**.
What if it is not right?	• Alter the temperature of the display unit so it is 15 °C or colder. • Discard any nori rolls that have been at 5-15 °C for 12 hours or more. • Discard any nigiri pieces that have been at 5-15 °C for eight hours or more.

Food handling practices

#16 Sushi preparation and display

Required records

Sushi preparation

To check

pH, temperature

How often

Record per batch of rice made.

Record at time of sushi manufacture.

Sushi display time log

To check

Temperature and time

How often

Per batch displayed

Food handling practices

#16 Sushi preparation and display

What are the risks?

- The addition of vinegar to rice produces an acidic environment, discouraging the growth of food poisoning bacteria. If sushi is at a pH of more than 4.5, bacteria can grow, making the product unsafe.
- If sushi is clean and free from contamination, the acidity of the rice helps protect other ingredients in the sushi products from bacterial growth. The pH of the rice and vinegar mix must be 4.0 and be checked every time before it is used to make sushi.
- Growth rates of food poisoning bacteria increase in nori rolls after 12 hours at or above 15 °C.
- Growth rates of food poisoning bacteria increase on nigiri pieces after eight hours at or above 15 °C. As the rice does not surround the fish, the acidity of the rice is not able to protect the pieces for as long as it can in nori rolls.

Food handling practices

#16 Sushi preparation and display

What is sushi defined as?

The term 'sushi' in this food safety program refers to nigiri pieces and nori rolls in general.

A nigiri piece is a piece of seafood (raw or cooked) placed on top of vinegared rice. A nori roll is defined as vinegared rice, seafood (raw or cooked) and/or vegetables or other ingredients rolled in seaweed sheets.

Food handling practices

#16 Sushi preparation and display

Tips

- Keep a note of the amount of vinegar required to achieve the correct pH.
- Start the display time for sushi immediately after the sushi is cooled to 15 °C.
- Handle ingredients as little as possible and ensure that utensils used are clean and free from contamination.
- Discard acidified rice stored between 5-15 °C after eight hours.
- The pH of rice and vinegar mix must be at a pH of 4.0.
- The pH of the sushi end product (rice, seaweed paper and filling) must be pH 4.5.
- Always use high-quality fillings and fresh fish.
- Fillings for sushi must be prepared, stored, cooked, cooled and packaged as per your food safety program.
- Fillings for sushi must be prepared, stored, cooked, cooled and packaged as per your food safety program.
- When sushi is made it needs to be cooled to 15 °C in six hours or less.
- If you prepare sushi to supply to another business and the sushi is not cooled before it is transported, you will need to give a copy of **Record 6: Sushi preparation** to your customer with the order.
- Check the time and temperature of sushi when delivered.
- Record delivery time if sushi is delivered above 15 °C. Your supplier will need to tell you what time this delivery started.
- Record the time the sushi is put on display daily.
- The temperature of nigiri pieces and nori rolls must be kept at 15 °C or less. Nigiri pieces can be displayed for up to eight hours at 15 °C or less. Nori rolls can be displayed for up to 12 hours at 15 °C or less.
- Record the temperature of the display unit twice a day.
- If the sushi temperature is above 15 °C, record what you did to reduce the temperature in the 'Corrective Action' column of **Record 7: Sushi display time log**.
- Record the time sushi is removed from the display.
- If all stock has been sold, note this in the 'Corrective Action' column of **Record 7: Sushi display time log**.
- To find out more about allergens and intolerances, and how you may help customers with allergen questions, see **Support program 1: Food allergens, intolerances and general information for customers**.

Food handling practices

#17 Preparing Chinese-style roast duck

Issues

1. Growth of bacteria

Dipping and drying	
What can I do?	• Dip the duck in boiling water containing vinegar (other ingredients, and the amount of vinegar used, will be dependent on traditional recipes; the actual amount of vinegar used is not important). • Hang the duck to dry in the coolroom for no longer than six hours.
How can I check?	• Use a probe thermometer to check the core temperature of every duck prepared at the beginning of the drying process and roughly halfway through. • Be careful to insert the probe thermometer in an area that will cause minimal damage to the duck's skin. • Check that the core temperature of the duck does not reach more than 25 °C throughout the drying process. • Record when the drying time starts and finishes in **Record 8: Chinese style duck drying log**.
What if it is not right?	• If the water and vinegar mixture has cooled down before you have dipped the duck, re-boil it prior to dipping. • If any ducks reach a core temperature higher than 25 °C at any time during the drying process move them to refrigeration until the temperature drops. • Discard any ducks that have been hung to dry for longer than six hours. • This six hours drying time limit is cumulative. If the ducks had to be put into refrigeration to drop their core temperature, the time they had already been hung to dry before being put into refrigeration must be added to the time they are hung to dry again once they are removed from refrigeration.

Food handling practices

#17 Preparing Chinese-style roast duck

Required records

Chinese-style roast duck drying log

To check

How long ducks are hung to dry

How often

Weekly

Food handling practices

#17 Preparing Chinese-style roast duck

What are the risks?

- Water below boiling point can retain harmful bacteria. Duck must be dipped in water at boiling point (100 °C). The boiling water kills any bacteria present on the surface of the duck's skin.
- Vinegar alters the pH of the skin and, therefore, it limits the ability of food poisoning bacteria grow.
- Temperatures above 25 °C provide an environment that encourages bacterial growth.
- After six hours of hanging, bacterial growth starts to increase. In addition, cooking the duck will

Food handling practices

#17 Preparing Chinese-style roast duck

Tips

- Check temperatures of dipping water using a probe thermometer.
- Check the temperature of duck using a probe thermometer and record the length of time (individually and cumulatively) the duck is in the prescribed temperature zones.
- Ensure thermometers are cleaned properly before and after each use.
- Only use clean and sanitised equipment when handling and preparing duck.
- To find out more about food allergens and intolerances, and how you may help customers with their questions, see **Support program 1: Food allergens, intolerances and general information for customers.**

Food handling practices

#18 Preparing Chinese-style chicken

Issues

1. Growth of bacteria.

Dipping water	
What can I do?	• Dip the chicken in boiling water containing salt or soy sauce. • The actual recipe used will be dependent on traditional recipes and the amount of salt or soy sauce used is not important.
How can I check?	• Inspect to see that all water used for dipping the chicken is boiling rapidly before use.
What if it is not right?	• If the water and soy sauce mixture has cooled down before you have added the chicken, re-boil it prior to adding the chicken.

Raw materials	
What can I do?	• Only use high-quality chickens without any broken skin.
How can I check?	• Inspect the chickens to make sure they do not have any broken skin.
What if it is not right?	• Do not use a chicken with broken skin for this style of cooking.

Food handling practices

#18 Preparing Chinese-style chicken

What are the risks?

- Water below boiling point can retain harmful bacteria. Chicken must be dipped in water at boiling point (100 °C). The boiling water kills any bacteria present on the surface of the chicken's skin. The salt content in soy sauce is not sufficient to alter the water activity and the ability of food poisoning bacteria to grow on the chicken's skin.
- The altered bacterial activity on the skin is not sufficient to limit bacterial growth.

Food handling practices

#18 Preparing Chinese-style chicken

Tips

- Check temperatures of dipping water using a probe thermometer.
- Record the length of time (individually and cumulatively) that chicken is held in the temperature danger zone of 5 °C to 60 °C.
- Ensure thermometers are cleaned properly before and after each use.
- Only use clean and sanitised equipment when handling and preparing chickens.
- To find out more about food allergens and intolerances, and how you may help customers with their questions, see **Support program 1: Food allergens, intolerances and general information for customers**.

Food handling practices

#19 Displaying Chinese-style roast meats

Issues

1. Growth of bacteria.

Condensation in display	
What can I do?	• Ensure the display area is not enclosed to allow air into the display area and reduce condensation.
How can I check?	• Check that condensation does not fog up the display case. Inspect to see there is no moisture build-up.
What if it is not right?	• Clean the display screen/glass with a clean dry cloth. • If there is moisture build-up in the area, use a different display area.

Hanging meat	
What can I do?	• Ensure there is enough space in the display area to allow for all the meats to be hung far enough away from each other, so they are not touching each other or any of the other meats on display.
How can I check?	• Inspect the meats to ensure that they do not touch each other or any of the other meats on display.
What if it is not right?	• If meats are touching each other, move them apart immediately. If meats have been in contact with each other for an extended period of time cut them up and reheat to 60 °C or hotter.

Food handling practices

#19 Displaying Chinese-style roast meats

Handling and displaying meat	
What can I do?	• Carry the meats using a hanging hook, rather than by touching the surface of the meats.
How can I check?	• Inspect to see whether the skin and surface of the meats are intact and undamaged. • Ensure there is no human contact with the surface of the meats while they are on display. • Record the time meat goes on display and when it is removed on the **Record 9: Meat display time log**.
What if it is not right?	• Once the surface of the meat is broken or damaged, or there is human contact with the surface of the meat, cut it up and reheat to 60 °C. • Discard any duck and/ or chicken that has been on display for longer than 22 hours. • Discard any BBQ pork that has been on display for longer than seven hours.

Food handling practices

#19 Displaying Chinese-style roast meats

Required records

Chinese-style meats display time log

To check

The amount of time meat is on display

How often

Weekly

Food handling practices

#19 Displaying Chinese-style roast meats

What are the risks?

- Moisture build-up in the display area will increase the water activity on the skin of the meat. Increased water activity on the skin encourages the growth of food poisoning bacteria.
- If meats touch each other, the moisture (water activity) on its skin or surface increases. This increases the possibility of bacterial growth.
- As Chinese-style roast duck, chicken and BBQ pork are on display at room temperature, which is in the temperature danger zone of 5 °C to 60 °C, bacteria can multiply quickly.
- Food poisoning bacteria grow on meat very quickly. The skin must be intact to keep the meat safe.
- After 22 hours on display at room temperature (that is, out of temperature control), food poisoning bacteria will be present and have multiplied on the surface of the chicken and duck skins.
- After seven hours on display at room temperature (that is, out of temperature control), food poisoning bacteria will be present and have multiplied on the surface of the pork.

Food handling practices

#19 Displaying Chinese-style roast meats

Tips

- Make sure staff use gloves and that they understand how to use their gloves safely and hygienically.
- Make sure the display unit and utensils are clean before use.
- To find out more about food allergens and intolerances, see **Support Program 1: Food allergens, intolerances and general information for customers**.

Food handling practices

#20 Acidification and fermentation

Issues

1. Purchasing and receiving food: Receiving incorrect raw materials or ingredients containing, such as allergens or additives. This can cause harm to some customers and may mislead others.

Correct raw materials	
What can I do?	• Make sure you know what is present in the foods you use as ingredients. • Make sure raw materials, packaging or ingredients you receive are to your specification.
How can I check?	• Compare brand name, grade of food received with your purchase details, and/or your specifications.
What if it is not right?	• Reject raw materials, packaging or ingredients that do not match the correct specification. • Reject suppliers that do not provide food and packaging the way you want it. • Change practices and labels so that they comply with the Code.

Food handling practices

#20 Acidification and fermentation

2. Processing food: Fermentation may fail or be difficult to control if the raw materials and ingredient used contain large populations of bacteria or yeast.

Raw materials	
What can I do?	• Ensure your raw materials and ingredients are prepared adequately prior to acidification to reduce levels of bacteria or yeast present.
How can I check?	• Ensure your preparation process involves reducing these populations. For example, by removing outer leaves from vegetables such as cabbages, washing and/or peeling root vegetables, hard boiling eggs, using pasteurised milk or heat treating fruit used for flavouring.
What if it is not right?	• Discard products if fermentation fails and pH of less than 4.6 is not achieved within the specified timeframe for your product. • Change raw material specification and/or supplier.

Food handling practices

#20 Acidification and fermentation

3. Processing food: Growth of food poisoning bacteria.

Starter cultures	
What can I do?	• Rotate your stock to ensure you use your starter cultures within their use-by or best-before date. • Ensure starter cultures are covered to protect from dust and other airborne contaminants.
How can I check?	• Check your starter culture before use to ensure it is in date and free from signs of contamination or spoilage.
What if it is not right?	• If your culture is out of date or contaminated, discard it and start again using a new culture.

Brewed soft drinks and fermented milk: Pitching amount	
What can I do?	• The amount (or dosage) pitched must be greater than 10 per cent. A pH of less than 4.6 must be achieved within four hours.
How can I check?	• Calculate the amount of starter culture pitched using the calculation in Appendix 2. • Use pH strips or a calibrated pH probe to measure the pH is below 4.6 within four hours. • If your product's pH does not drop to less than 4.6 within four hours you must provide evidence that the product is safe. Food safety parameters require scientific testing/justification.
What if it is not right?	• Add more acid to immediately decrease pH to less than 4.6. • Discard if you see any signs of spoilage.

Food handling practices

#20 Acidification and fermentation

Processing food: Rapid pH drop	
What can I do?	• Food poisoning bacteria can grow in high-risk food if acidification is too slow and a pH level of less than 4.6 is not achieved rapidly. • You must be able to show your acidification process is effective to ensure food poisoning bacteria does not grow to harmful levels prior to achieving your target pH. • Ensure your food sample is prepared appropriately to ensure accuracy in pH testing. See **Record 12: My pH checks and meter accuracy** for how to prepare your sample.

How can I check?	• Use pH strips or a calibrated pH probe to measure that the pH is below 4.6, within the following timeframes:
	  ○ yoghurt – 6 hours
	  ○ fruits, vegetables and eggs – 24 hours.
	• Use **Record 12: My pH checks and meter accuracy** to record your pH results. Records include an initial validation period followed by a monthly process validation test.
	• If your product's pH does not drop to less than 4.6 within the periods specified, you must provide evidence that the product is safe. Food safety parameters require scientific testing/justification.

What if it is not right?	• Add more acid to immediately decrease pH to less than 4.6. Discard if you see any signs of spoilage. • Re-calibrate pH probe, repair or replace equipment if necessary. • Review your product and processes to ensure your fermentation is satisfactory.

Food handling practices

#20 Acidification and fermentation

4. Processing food: Food-poisoning bacteria can grow in high-risk foods if the acid level is insufficient your finished product.

Sufficient acid	
What can I do?	• Check the pH of your product to ensure a pH of less than 4.6 is achieved. • Ensure your food sample is prepared appropriately to ensure accuracy in pH testing. **See Record 12: My pH checks and meter accuracy** for how to prepare your sample.
How can I check?	• Use pH strips or a calibrated pH probe to measure the pH of your finished product. • Use Record 12: **My pH checks and meter accuracy** to record your pH results. Records include an initial validation period followed by a monthly process validation test. • If your product's pH does not drop to less than 4.6 you must provide evidence that the product is safe. Food safety parameters require scientific testing/justification.
What if it is not right?	• Add more acid to immediately lower pH to less than 4.6. Discard if you see any signs of spoilage. • Re-calibrate pH probe, repair or replace equipment if necessary. • Review your product and processes to ensure your fermentation is satisfactory.

Food handling practices

#20 Acidification and fermentation

5. Processing food: Growth of spoilage bacteria occurs producing toxic by-products, such as funga toxins.

Fungal toxins	
What can I do?	• Ensure food during manufacture is covered to protect from dust and other airborne contaminants.
How can I check?	• Look for mould or yeast activity on the surface, colour changes, off smells.
What if it is not right?	• Discard food products if you suspect they have spoiled. • Review procedures, handling and recipe used for reason for failure.

Food handling practices

#20 Acidification and fermentation

6. Processing food: Food-poisoning bacteria can grow if your product is not stored at the correct temperature.

Temperature control	
What can I do?	• Store product at 5 °C or less.
How can I check?	• Measure core temperature of high-risk food stored in the refrigerator using a probe thermometer regularly (at least once a day). • Use Record 2: **My temperature checks of food in cold or hot storage** to record you results daily. • If your product does not require temperature control you must provide evidence that the product is safe stored at room temperature. Food safety parameters require scientific testing/justification.
What if it is not right?	• Discard food if you suspect it has not been stored correctly.

Food handling practices

#20 Acidification and fermentation

7. Packaging and labelling food: Finished product in glass bottles can explode from the overproduction of fermentation gasses, causing injury.

Controlling fermentation	
What can I do?	• You must be able to show your fermentation process is effective to ensure gas production does not cause glass packaging to explode. Your finished product must be stored at 5 °C or less.
How can I check?	• Measure core temperatures of high-risk food stored in the refrigerator using a probe thermometer regularly (at least once a day). • Use **Record 2: My temperature checks of food in cold or hot storage**, to record you results daily.
What if it is not right?	• Discard food if you suspect it has not been stored correctly or has overproduced gas and may explode.

Food handling practices

#20 Acidification and fermentation

8. Packaging and labelling food: Food-poisoning bacteria can grow to harmful levels if use-by and before dates are not accurate.

Shelf life	
What can I do?	• You must be able to show your food is safe to eat for the lifespan (shelf life) of your product. This is the period indicated by the use-by date or best-before date. • If your product's shelf life changes upon opening, this secondary shelf life must also be considered.
How can I check?	• Provide evidence of shelf life determination. Food safety parameters require scientific testing.
What if it is not right?	• Review your product and processes to obtain food safety within your shelf life period.

Food handling practices

#20 Acidification and fermentation

9. Packaging and labelling food: Food-poisoning bacteria can grow in high-risk foods if they are not stored at the correct temperature.

Temperature control	
What can I do?	• Ensure products are stored and transported at the correct temperature. • Label your product with storage instructions, including instructions for storage once opened.
How can I check?	• Check that your label and product information is accurate and meets the requirements in the Code.
What if it is not right?	• Revise information so it is correct.

Food handling practices

#20 Acidification and fermentation

10. pH measurement and equipment: If pH meters are not accurate, the pH of your food may be ab 4.6 and allow food-poisoning bacteria to grow.

pH meter accuracy	
What can I do?	• Calibrate pH meters each day they are used. • External calibration should be undertaken as per the manufacturer's instructions.
How can I check?	• Conduct testing using standard buffer solutions. • Use **Record 12: My pH checks and meter accuracy** to record your pH meter calibration. • Have equipment calibrated by the manufacturer, supplier or an external contractor.
What if it is not right?	• Have faulty pH meters repaired or replaced. • Clean the pH meter probe regularly, as per the manufacturer's instructions to ensure any food residue is removed from the meter probe. • Ensure pH buffers are within use-by date. • Ensure the pH meters are stored as per the manufacturer's instructions.

Food handling practices

#20 Acidification and fermentation

11. pH measurement and equipment: If pH indicators (also known as strips or litmus paper) are not suitable measurement tools (not adequately precise or accurate) for your food, the pH may be abo 4.6 and allow food poisoning bacteria to grow.

pH indicators	
What can I do?	• Use pH strips that provide measurement with adequate precision for your product. Do not use pH strips on highly coloured food which may discolour the paper and stop you from measuring pH accurately.
How can I check?	• Have a laboratory test your food to prove accuracy of your pH measurement.
What if it is not right?	• Replace pH papers with a product with better precision. • Use a pH meter to measure the pH of highly coloured foods. Use a pH meter to test the pH of your food.

Food handling practices

#20 Acidification and fermentation

12. Packaging and labelling food: Not meeting the requirements of the Code to include important information for customers about beverages and food containing alcohol. Failure can cause harm to some customers and may mislead others.

Declaration of alcohol	
What can I do?	• Make sure the presence of alcohol is declared on any food or beverage that is required to bear a label.
How can I check?	• Check that your label and product information is accurate and meets the requirements of the Code.
What if it is not right?	• Change practices and re-label food so that labels comply with the Code. • Revise information so it is correct.

Food handling practices

#20 Acidification and fermentation

13. ADDITIONAL REQUIREMENTS FOR BREWED AND FERMENTED SOFT DRINKS: Overproduction of alcohol when manufacturing non-alcoholic brewed beverages. Failure can cause harm to some customers and may mislead others.

Alcohol production	
What can I do?	• Identify the alcohol strength limit you should adhere to and ensure your product contains no more than this predetermined limit. You must be able to show you can control secondary fermentation. • Ensure your process and formulation is followed accurately for each batch produced.
How can I check?	• Measure one sample from every finished batch produced for alcohol strength. • Record your results in **Record 13: Alcohol strength in my brewed soft drinks by batch**.
What if it is not right?	• Discard if alcohol is produced in excess of determined limits. Change practices and labels so they comply with the Code.

Food handling practices

#20 Acidification and fermentation

14. ADDITIONAL REQUIREMENTS FOR BREWED AND FERMENTED SOFT DRINKS: Overproduction of alcohol when manufacturing non-alcoholic brewed beverages. The alcohol strength must remain the appropriate limit for the duration of the product's shelf life.

Shelf life	
What can I do?	• Ensure alcohol production does not continue throughout your product's shelf life duration. • Ensure your process and formulation is followed accurately for each batch produced. • You must be able to show you can control secondary fermentation.
How can I check?	• Measure three samples from three concurrent batches (for each flavour you produce, regardless of when the flavour is added), at the end of their stated shelf life for alcohol strength. • You must provide certificates of analysis of measurement stating alcohol strength, including the variance, present in your product at the end of its shelf life. Certificates must be from a laboratory accredited by the National Association of Testing Authorities. Use **Record 14: Alcohol strength in my brewed soft drinks for the duration of shelf life** to record the results. • This record must be repeated annually, or if your product formulation or process changes you must provide new shelf life checks. • All new products and flavours require shelf life checks.
What if it is not right?	• Discard if alcohol is produced in excess of determined limits. • Change practices and labels so that they comply with the Code.

Food handling practices

#20 Acidification and fermentation

15. ADDITIONAL REQUIREMENTS FOR BREWED AND FERMENTED SOFT DRINKS: Fermentation can continue post manufacturing, causing the production of alcohol.

Controlling fermentation	
What can I do?	• Store and transport your product at 5 °C or less. • Ensure the storage instructions are legible and prominent.
How can I check?	• Measure core temperatures of brewed soft drinks in the refrigerator using a probe thermometer regularly (at least once a day). • Use **Record 2: My temperature checks of food in cold or hot storage** to record you results daily.
What if it is not right?	• Discard the product if you suspect it has not been stored correctly. • Discard if alcohol is produced in excess of determined limits. Change practices and labels so that they comply with the Code.

Food handling practices

#20 Acidification and fermentation

16. ADDITIONAL REQUIREMENTS FOR BREWED AND FERMENTED SOFT DRINKS: If your method of alcohol measurement is not suitable, the alcohol in your product may be greater than 1.15% ABV.

Alcohol measurement	
What can I do?	• Ensure your method of measurement is accurate and precise.

How can I check?	• Permissible methods to test the alcoholic strength of your products, corrected to 20 °C are:
	  ○ gas chromatography
	  ○ near infra-red spectrometry
	  ○ distillation followed by the gravimetric measurement of the distillate or by measurement in a density meter
	  ○ any other method that consistently produces a similar result by a documented testing process where you have compared your results to those from a laboratory accredited with the National Association of Testing Authorities (if you produce less than 100,000 litres of brewed soft drink per year you may use an ebulliometer to measure alcohol strength, use **Record 16: My ebulliometer accuracy checks for measuring alcohol strength in brewed soft drinks** to validate your process. This record must be repeated annually).
	• Use **Record 15: How I measure the alcohol strength in my brewed soft drinks** to record the results.

What if it is not right?	• Use measuring equipment that can provide adequate precision and accuracy for your product.

Food handling practices

#20 Acidification and fermentation

17. DISPLAYING BREWED AND FERMENTED SOFT DRINKS: Fermentation can continue post-manufacturing, causing the production of alcohol.

Manage your suppliers	
What can I do?	• Only buy from reputable suppliers. • Request that brewed and fermented soft drinks are made to a requested standard, as outlined above.
How can I check?	• Ask suppliers for information about their products or a copy of their completed **Record 13: Alcohol strength in my brewed soft drinks by batch.** • Measure the temperature of deliveries to see whether they are 5 °C or less.
What if it is not right?	• If the temperature of the product is above 5 °C when delivered, reject the delivery. • Discard food if you suspect it has not been stored correctly.

Food handling practices

#20 Acidification and fermentation

Required records

My pH checks and meter accuracy

To check

pH Measurement

How often

Validation initially, and ongoing monthly checks

Alcohol strength in my brewed soft drinks by batch

To check

Alcohol strength in brewed soft drinks

How often

Per batch

Alcohol strength in my brewed soft drinks for the duration of shelf life

To check

Alcohol strength at end of shelf life

How often

Annually

How I measure the alcohol strength in my brewed soft drink

To check

Method of measurement for brewed soft drinks

How often

Once

My ebulliometer accuracy checks for measuring alcohol strength in brewed soft drinks

To check

Ebulliometer accuracy

How often

Annually

Food handling practices

#20 Acidification and fermentation

What are the risks?

What is acidification?

Acids can be used in food processing for flavour development or preservation (food safety). This guidance tool addresses the use of food acid as a food safety mechanism. Although acidified and fermented foods are generally considered safe, process failures and contaminated raw materials have resulted in food poisoning outbreaks.

Food acids, such as lactic, acetic, citric, malic, tartaric and propionic, may:

- be naturally present
- be added to the food
- result from microbial activity, such as fermentation.

Note: The principles in this supplement do not cover all foods processed by acidification, such as:

- uncooked meats (that is, smallgoods)
- uncooked seafood
- sushi (refer to the FoodSmart sushi practices section).

How is acidity measured?

The strength of acid is measured by pH, which is a numeric scale used to specify the how acidic a food is.

pH is measured using a pH meter or pH strips. Products are acidic if they are less than 7.0 on the pH scale (see Figure 1).

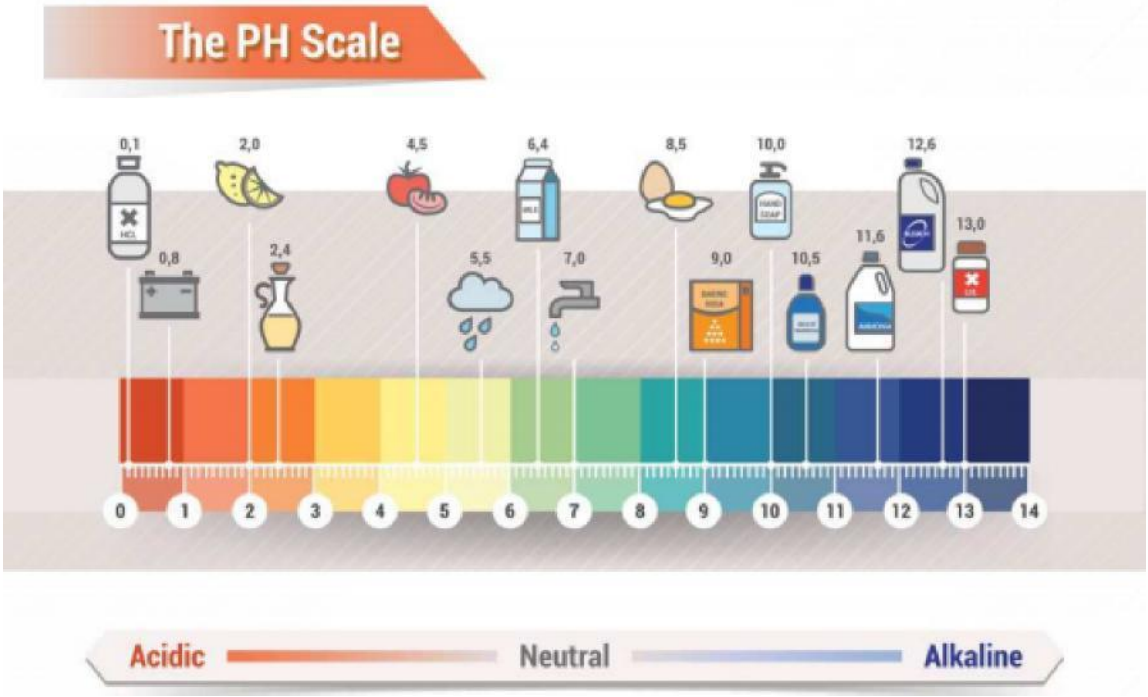
Accurate and precise pH measurement is critical for food safety. Measuring equipment needs to be

appropriate to your food parameters and operating effectively. Refer to the pH measurement and equipment section of this FSP supplement below.

Food handling practices

#20 Acidification and fermentation

Figure 1: The pH scale



Why is pH so important?

As many acidified foods do not undergo a cooking process, there is increased risk that food-poisoning bacteria, and the toxins some produce, may grow in your product to harmful levels. This can occur if the pH of your product is above pH 4.6. The risk of botulism (from *Clostridium botulinum* spores germinating and producing toxins) is increased if the pH is above pH 4.6. These bacterial toxins are not destroyed by further cooking and can cause life-threatening food poisoning.

The Code requires compliance with specific pH levels for some products; these are detailed in Table 1. For further information visit the Food Standards Australia New Zealand (FSANZ) website http://www.foodstandards.gov.au/Pages/default.aspx.

To ensure the safety of your food, you should aim for a pH of 4.2 in your acidic foods so that these products stay well under the critical pH 4.6 throughout their entire shelf life. Be aware that the pH may rise initially. This can happen if the acid is neutralised by the food or as it is absorbed into the food.

Food handling practices

#20 Acidification and fermentation

Table 1: Standards for pH of foods, Australia New Zealand Food Standards

Code Standard 2.3.1 Fruits and vegetables

Fruit and vegetables in brine, oil, vinegar or water must not have a pH greater than 4.6
pH Limit: [4.6

Standard 2.5.3 Fermented milk products

Fermented milk or yoghurt should have a pH of no greater than 4.5
pH Limit: [4.5

Preserving food with acid

Using the properties of food acids for the purpose of preservation

Acids, such as the lactic acid produced by fermenting vegetables, act as preservatives by stopping or slowing the growth of food-poisoning and spoilage bacteria.

Some food acids are more inhibitory to bacteria than others. Acetic and lactic acids are generally the most inhibitory, but the strength of an acid is not necessarily an indicator of its inhibitory powers. Food can be acidified by direct acidification or fermentation.

A low pH alone is not enough for adequate food safety

Some food-poisoning bacteria, such as *Salmonella spp.*, *Escherichia coli* and *Listeria monocytogenes*, can still grow in food below pH 4.6. Therefore, acid is not normally the sole control measure but is used in combination with other control measures (known as hurdles).

Good manufacturing practices, a robust hazard analysis and control process-based food safety program and good hygiene practices, all play key roles in preventing food borne illness.

- Food safety in acidification and fermentation specifically requires:
  - good quality, undamaged, raw material
  - contamination prevention (before, during and after processing)
    well-controlled acidification and fermentation.

See Table 2 for examples of these food safety steps.

In addition to these preventive controls, combinations of acid and certain ingredients act to magnify the preservation power.

Other ingredients that can be used in combination with acid are:

- salt and/or sugar – some bacteria are salt intolerant; others can be controlled by lowered water activity which can be achieved with the addition of salt and sugar
- preservatives – additives such as sorbic acid or benzoic acid can be added according to the specification in the Code. For further information, see 'Standard 1.3.1 Food additives'
- nisin – an antibacterial protein produced by bacterium Lactococcus lactis.

Food handling practices

#20 Acidification and fermentation

Table 2: Food safety steps and examples of suitable parameters

Good quality undamaged raw materials

Use trusted raw materials suppliers who have adequate food safety measures in place.

Remove dirt and bacteria from raw produce by washing produce in potable water or removing contaminated or damaged outer leaves or skins.

Use heat treatment to eliminate competing bacteria prior to acidification, such as pasteurised milk for making yoghurt.

Contamination prevention

- Use good personal hygiene practices (such as hand washing).
- Use effective cleaning and sanitising procedures.

Well Controlled acidification and fermentation

- Use tested recipe and ensure this same recipe is followed accurately each time you make your product.
- Know and maintain the correct fermentation temperature for your product.
- Refrigerate finished product at <5 °C.
- Use heat treatment (where appropriate) on your finished product.
- Add between 1 and 3.5% salt to fermented vegetables to inhibit salt-tolerant food poisoning bacteria prior to food acid production. See Appendix 1 (page 150) on how to calculate the correct amount of salt for your food.

Methods and processes for the acidification of food

The two processes for the acidification of food are direct acidification and fermentation.

Direct acidification of food

- The inactivation or inhibition of food-poisoning bacteria by direct acidification is achieved by directly adding acid to food. The acid acts in conjunction with heat treatment or water activity lowering substances such as salt and sugar. Some examples of direct acidification include adding:
- vinegar to onions for pickled onions, or to cucumbers for pickles (gherkins)
- vinegar to artichokes for later sealing in oil
- lemon juice to milk to make paneer.

Changes in pH are immediate. Sufficient acid must be added to account for any neutralisation or absorption of acid by the food.

Food handling practices

#20 Acidification and fermentation

Does your food business prepare vegetables in oil?

When vegetables are packed in oil and sealed in jars or bottles, it creates a low-oxygen environment that favours the growth of pathogens such as *Clostridium botulinum*, which can cause botulism. Oil prevents oxidation and discolouration of vegetables in the containers, but it does not kill microorganisms. To inhibit pathogen growth, the vegetables must be acidified with acid (such as, vinegar or lemon), to a pH of 4.6 or lower, before adding oil. Any herbs or spices added to the vegetables must be similarly treated or be thoroughly dried (to reduce their water activity) before being mixed with the vegetables.

Tomatoes are a special case. A fresh tomato has a pH of just below 4.6. When dried (or semi-dried), the acid concentrates and the pH is reduced.

Fermentation of food

Fermented food and beverages undergo a microbial process where yeasts, bacteria or moulds, degrade or break food components into by-products. For example:

- sugar is converted to a food acid (yoghurt, sauerkraut, kombucha)
- sugar is converted to an alcohol (beer, wine)
- alcohol is converted to a food acid (vinegar).

Fermentation controls food-poisoning bacteria by:

- competition – where fermentation bacteria compete for available nutrients with other bacteria inhibition – where fermentation bacteria make substances that inhibit growth of unwanted microorganisms
- displacement – where fermentation bacteria are present in numbers that allow them to be the most numerous organisms on the surface of the food. Bacteria often need to attach to the surface of the food to survive.

Using starter cultures

To ensure satisfactory and consistent fermentation results, and to inhibit the growth of food-poisoning bacteria, the use of product-specific starter cultures is recommended.

Commercially produced starter cultures use bacteria that assist at the beginning of the fermentation process and are specific to the chosen food type.

Using a starter culture is the best way to ensure a uniform finished product. Follow the manufacturer's direction regarding dosage and optimum temperatures.

It is best practice to use new starter cultures for each batch. If you do not use a new starter culture, you must follow the specific guidelines set out in your FSP. See Appendix 2 (page 150) for pitching calculation examples. Not doing so can result in unsatisfactory and unsafe fermentation.

Food handling practices

#20 Acidification and fermentation

Fermentation temperature

Each product has an optimum fermentation temperature for a satisfactory result.

Fermentation will favour the survival of any food-poisoning bacteria present if the temperature is too cold, as food-poisoning bacteria can grow when fermentation is slowed.

Optimum temperatures ensure the best flavour and health of preferred bacteria. This should be carefully controlled and measured. If you are unsure of the optimum temperature for your starter culture, follow recommendations and guidance from the culture manufacturer, or seek expert advice from a food technologist.

Duration of fermentation

Fermentation must be as rapid as possible to ensure food-poisoning bacteria do not grow. The time taken to achieve a pH drop to under pH 4.6 must be within the specified period for your product(s). You should observe the pH drop happen within a consistent timeframe with each batch you produce. If you cannot achieve this repetition, you should review your processes.

Fermented foods and beverages containing alcohol

During the fermentation process sugar can be converted to alcohol, therefore fermented products may contain alcohol.

Food and beverages that contain alcohol must comply with the Australia New Zealand Food Standards Code - 'Standard 2.7.1 Labelling of alcoholic beverages and food containing alcohol' and any relevant *Liquor Licensing Act* for the state and territories where it is sold. For further information visit the FSANZ website <http://www.foodstandards.gov.au/Pages/default.aspx> and the Victorian Commission for Gambling and Liquor Regulation <http://www.vcglr.vic.gov.au/>.

Please note: If you are selling product within the state of Victoria, and your product exceeds 0.5% alcohol by volume (ABV), it is considered a liquor and falls under the *Victorian Liquor Control Reform Act 1998*. You are required to hold a liquor license to sell this type of product.

Food handling practices

#20 Acidification and fermentation

Measuring alcohol strength in brewed soft drinks

Popular techniques for measuring alcohol strength in alcoholic drinks, such as using a hydrometer for beer and wine, may not be appropriate for some brewed soft drinks like kombucha and kefir. This is due to the presence of organic acids produced during the fermentation process that can cause inaccurate results.

To obtain an accurate measure of the strength of alcohol in these products, you can use:

- gas chromatography
- near infra-red spectrometry
- distillation followed by the gravimetric measurement of the distillate or by measurement in a density meter, or
- ebulliometer.

The ebulliometer is an economical way to measure alcohol strength, and is a permissible method if you are using this FSP and producing less than 100,000 litres of brewed soft drink in one calendar year. If you are producing more than 100,000 you must use one of the other methods.

Necessary skills and knowledge

- If you are using this section, you must be able to demonstrate sound knowledge of:
- the fermentation methos used
- how the equipment is operated
- how risk is managed
- how to fill in the correct records

Identifying allergens in your ingredients, products and processes:

- Failing to identify and label allergens correctly in your product can result in life-threatening allergic reactions in some people. Refer to Support program 1: Food allergies, intolerances and general information for customers for more information on allergens.
- Food allergens can be present in many food ingredients and are not always obvious from their name. Once a recipe has been formulated, each ingredient must be carefully reviewed. Identify any allergens by reviewing ingredient specifications and labels, speaking to suppliers and understanding how to identify the less obvious ones. You can also use an external certified laboratory to test your ingredients to confirm composition and labelling information.
- A useful resource is the Allergen Bureau's Unexpected Allergens in Food. This guide assists the food industry to identify basic food ingredients and food additives that may contain or be derived from one or more of the allergens required, by the Code, to be identified on food labels when present. The guide is available on the Allergen Bureau website <https://allergenbureau.net/>.
- For an example of labelling of allergens see Appendix 3 (page 151).

Food handling practices

#20 Acidification and fermentation

Appendices

Appendix 1: Calculating the correct amount of salt for fermented vegetables

How to calculate the correct amount of salt for fermented vegetables

Fermented vegetables, such as sauerkraut or kimchi, need between 1% and 3.5% salt to provide adequate food safety during fermentation.

To calculate what percentage salt you are currently dosing, use the following calculation:

Divide the amount of salt by the amount of vegetables and multiply it by 100.

Amount of salt X 100 = percentage of salt

Amount of vegetables

Note: both vegetables and salt must use the same unit of measurement, such as grams.

For example, when making sauerkraut you are using 2 kg of cabbage and 40 g of salt. (40g/2000g) X 100 = 2%

Therefore, your recipe uses 2% salt.

To calculate a 2% salt dosage, for example, use the following calculation.

If you do not know how much salt to use in your formulation, use the following calculation: weight of vegetables X 2% = grams of salt required.

Note: both vegetables and salt must use the same unit of measurement, such as grams. For example, if you are using 2 kg of cabbage your recipe should contain 20 g of salt.

Appendix 2: Calculating dosage for starter culture pitching in brewed soft drinks

How to calculate starter culture percentages for pitching

Only brewed soft drinks and fermented milks (not yoghurt), as defined by Standard 2.6.2 and 2.5.3-2 of the Code, can use starter cultures kept from a previous batch (known as pitching or back slopping). The amount (or dosage) pitched must be greater than 10%.

Solvent – the component of a solution that is present in the greatest amount, the substance in which the solute is dissolved.

Solute – substance that is dissolved in another substance (a solvent), forming a solution. Usually the smallest component.

Food handling practices

#20 Acidification and fermentation

To calculate what percentage you are currently dosing, use the following calculation:

solute/solvent X 100 = dosage percentage

To calculate a 10% dosage, use the following calculation.

solvent x 0.1 = solute

For example:

Using kombucha as an example, the solvent is the freshly brewed tea, and the solute is the small amount of starter culture used to start the fermentation. The solution is the mix of them both.

To calculate your dosage percentage:

The solute is 200 millilitres (mL) of starter culture to 2 litres (l) of the solvent which is the freshly brewed tea.

First you must convert both numbers to the same unit, in this case we will use mL. The solute is already in mL The solvent is 2 L, therefore is 2000mL.

(200 mL/2000 mL) x 100 = 10%

Therefore, your dosage rate is 10.

To calculate a 10% dosage:

2000 mL x 0.1 = 200 mL

Therefore, the amount you need to use to obtain a 10% dosage is 200 ml.

Appendix 3: A case study in labelling of allergens

A fermented vegetable manufacturer has begun developing a range of fermented vegetables. While they are developing and trialling their recipes, they know they need to take allergen management into account right from the start.

Once a recipe has been finalised, allergens are identified before accurate labelling can be completed. See table below for a recipe example detailing ingredients and their allergens.

Based on the information the company gathered from supplier specifications, labels and supplier questioning, and reviewing the requirements regarding the labelling of foods in the Code, the ingredient declaration for spiced sauerkraut was written as follows:

Cabbage (97%), salt, whey powder (contains milk), spices (contains wheat), starter culture (contains milk).

Food handling practices

#20 Acidification and fermentation

Spiced sauerkraut recipe – what to check:

Cabbage

- Contains an allergenic product (Yes, No, Maybe):

No

What to check:

- Check specifications for presence of allergens.

Salt

- Contains an allergenic product (Yes, No, Maybe):

No

What to check:

- Check specifications for presence of allergens.

Starter Culture

- Contains an allergenic product (Yes, No, Maybe):

Maybe

What to check:

- Check specifications for presence of allergens
- How is the starter culture grown?
- What is it grown on may need to be declared on the label
- Does the starter culture contain any bases, carriers, free-flowing agents (for example maltodextrin, flour, oleoresins, emulsifiers).
- If yes, what are they derived from? (for example, wheat, maize, soy, or egg?)

Whey Powder

- Contains an allergenic product (Yes, No, Maybe):

Yes, contains milk

What to check:

- Check specifications for presence of allergens

Pepper

Contains an allergenic product (Yes, No, Maybe):
Maybe

What to check:

- Check specifications for presence of allergens (see "supplier 1" example following)
- Do they contain any bases, carriers, free-flowing agents (for example maltodextrin, flour, oleoresins, emulsifiers).
- If yes, what are they derived from? (for example, wheat, maize, soy, or egg?)

Food handling practices

#20 Acidification and fermentation

Cumin

- Contains an allergenic product (Yes, No, Maybe):

Maybe

What to check:

- Check specifications for presence of allergens (see 'supplier 1' example following)
- Do they contain any bases, carriers, free-flowing agents (for example maltodextrin, flour, oleoresins, emulsifiers).

If yes, what are they derived from? (for example, wheat, maize, soy, or egg?)

Celery Seeds

- Contains an allergenic product (Yes, No, Maybe):

Maybe

What to check:

- Check specifications for presence of allergens (see "supplier 1" example following)
- Do they contain any bases, carriers, free-flowing agents (for example maltodextrin, flour, oleoresins, emulsifiers).

If yes, what are they derived from? (for example, wheat, maize, soy, or egg?)

Supplier 1: Raw materials – an example

A ground-spice producer advises that, due to growing, harvesting, storage and/or transportation conditions, cross-contact with wheat grains and pollen occurs, and there is high likelihood gluten will always be 'detectable' in the final ground spice. On occasion, gluten may be present at more than 20 mg/kg.

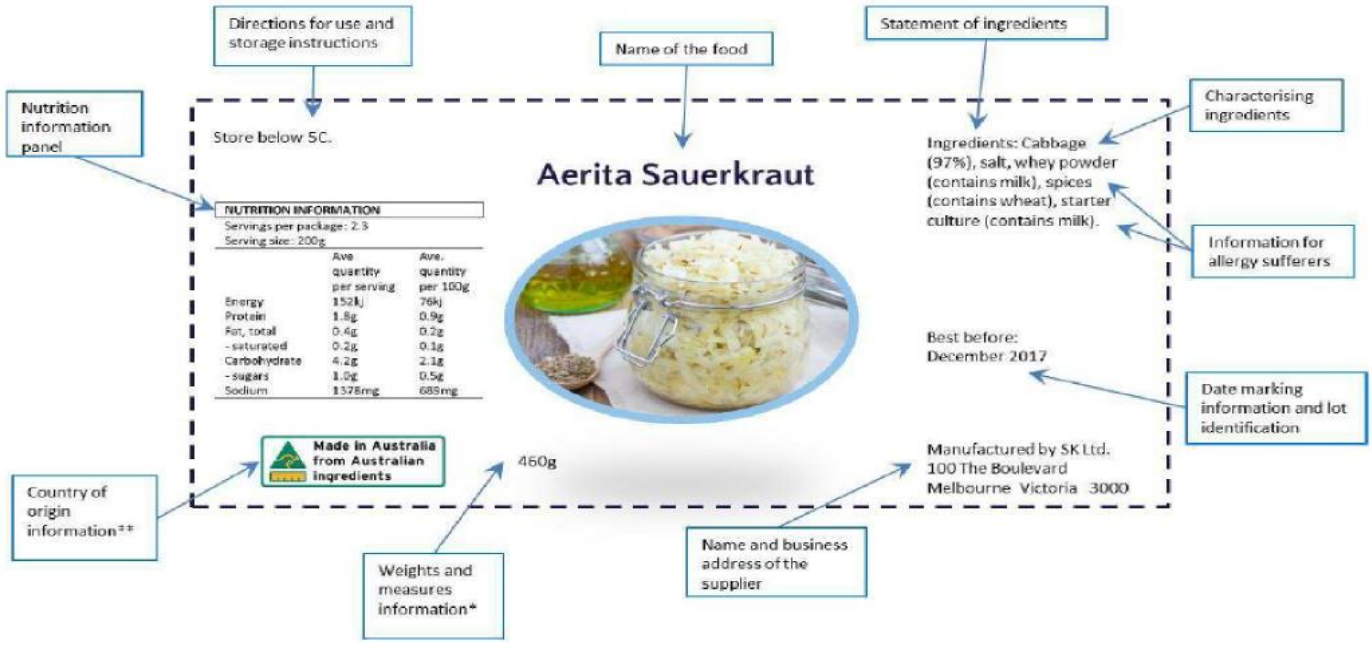
As the gluten protein is consistently present and with no way of controlling it, the supplier chooses to declare that it was an allergen present in the product.

Declaring it means that packaging the ground spice for direct sale requires a declaration that the product 'Contains wheat' and includes wheat in the ingredient list. Manufacturers using this ground spice as part of their product, even when present in small amounts, will also need to declare the presence of wheat.

Figure 2 Sauerkraut label example

Food handling practices

#20 Acidification and fermentation



*Labels must contain accurate weights and measures information. The National Measurement Institute are the national trade measurement regulator who ensure correct weight and measurement information is used on food labels, visit <http://www.measurement.gov.au> for more information.

**The Australian Competition and Consumer Commission ensure that correct country of origin information is used on labels, visit <www.accc.gov.au/consumers/groceries/country-of-origin> for more information.

Appendix 4: Calibrating your pH meter

Many pH meters are calibrated accurately when you buy them. This accuracy can be lost if it gets bumped, dropped or is used over a long time. You need to make sure your pH meter is showing you the right pH of food. You may want to check this more often, but you must check each pH meter every day you use it and record the result. Your pH meter should be accurate to pH +/- 0.01. If you have more than one pH meter, name it, for example P1, P2, P3 and label it, and note which one was used when completing your records.

How to check your pH meter

Step 1 - Place electrode into pH 4.0 *standard buffer, wait until the reading is stable and record the reading. An accurate meter will show a pH of between 3.99 and 4.01

Step 2 - Carefully rinse and dry the electrode, to ensure all pH 4.0 is removed

Step 3 - Place electrode into pH 7.0 *standard buffer, wait until the reading is stable and record the reading. An accurate meter will show a pH of between 6.99 and 7.01.

Step 4 - If the pH is greater or less than +/- 0.01, it may have a build-up present from food testing causing the inaccuracy. Remove the build-up from the probe and try again.

Food handling practices

#20 Acidification and fermentation

Step 5 - If the pH is still greater or less than +/- 0.01, the pH meter is inaccurate and needs to be replaced immediately.

*Standard buffers can be purchased from the same locations that sell pH meters. Buffers usually expire three months after they are opened. They must be disposed of once expired.

Food handling practices

#20 Acidification and fermentation

Tips

Shelf life

- Use-by and best-before dates can be determined by shelf life testing, which is normally undertaken in laboratory conditions. All shelf life studies include an assessment of the safety of the product and this assessment will normally precede any assessment of shelf life. Understanding the shelf life of your product is a key step in determining its safety, quality and profitability.

Getting the right raw materials

- Creating specifications for your raw materials is the best way to ensure you know exactly what is going into your product and ensuring accuracy in your labelling. Examples of the types of specification you may include can be:
    - organoleptic - such as flavour, colour, texture
    - physical - such as size, shape, foreign matter tolerances
    - microbiological - such as standard plate count, yeast and moulds, coliforms
    - chemical – such as pesticide residue, pH
    - allergen information – such as gluten free. Always review your raw material deliveries against your
    - specifications and reject any that do not meet your requirements.

Always review your raw material deliveries against your specifications and reject any that do not meet your requirements.

Food handling practices

#21 Packaging for manufacturers

Issues

1. Contamination of food with bacteria, chemicals or other non-food material, such as dirt or glass or pests.

Contamination of packaging	
What can I do?	• Assign a designated area for storing packaging material and for food packing. • Ensure packaging area is uncluttered, clean and sanitary before commencing packing/ packaging.
How can I check?	• Visually check the packaging area.
What if it is not right?	• Clean and sanitise packaging area before use. • Take necessary action to ensure premises is pest controlled. • Discard any damaged packaging or packaging that may be contaminated.

Food grade packaging	
What can I do?	• Use non-toxic food grade packaging. • Use packaging that is suitable for the food being packed.
How can I check?	• Check packaging supplier's product information. • Visually examine all packaged foods.
What if it is not right?	• Discard products not packaged appropriately.

Temperature control	
What can I do?	• Potentially hazardous foods should be packaged immediately to limit the time spent in the danger zone between 5 °C and 60 °C.
How can I check?	• Measure the amount of time the food is left out prior to packaging.
What if it is not right?	• If potentially hazardous food has been left out too long, it must be thrown out.

Food handling practices

#21 Packaging for manufacturers

2. Jars, bottles or other containers made of glass risk being chipped or cracked

Managing your suppliers	
What can I do?	• Supplier of glass packaging must be listed on **Record 1: My food, ingredient and packaging suppliers.** • Inspect all deliveries of glass packaging.
How can I check?	• Visually check each batch.
What if it is not right?	• Do not use damaged containers. • If, during transportation, packaging has been contaminated or damaged, the consignments should be returned to your supplier.

Food handling practices

#21 Packaging for manufacturers

3. Incorrect labelling

Labelling	
What can I do?	• Keep examples of labels until the end of the products' shelf life. • Record any special ingredients. • All food labelling or product information must comply with the *Australia New Zealand Food Standards Code*. • Record number of batches in line with the National Food Recall requirements.
How can I check?	• Visually check each batch.
What if it is not right?	• Labels with incorrect information are to be removed and destroyed, and a correct label applied to the product.

Food handling practices

#21 Packaging for manufacturers

Required records

My food suppliers

To check

All my suppliers

How often

It must be up to date. Ensure it includes current suppliers and all your suppliers for the previous two years.

Manufacturing internal review

To check

Internal review checklist

How often

Complete every three months

Food handling practices

#21 Packaging for manufacturers

What are the risks?

- Food products that are contaminated with physical, biological and chemical contaminants will make the food unsafe.
- If a product does not have appropriate labelling the product may be unsafe for some people and would be in breach of the *Australia New Zealand Food Standards Code* and a recall of the product may be required.

Food handling practices

#21 Packaging for manufacturers

Tips

- Do not use damaged packaging.
- Keep the packaging area uncluttered and free from any material not used for packaging of food.
- Food is to be appropriately labelled with the following information:
  - name or description of food
  - ingredients
  - percentage of key or characterising ingredients
  - weight (or liquid volume)
  - date or batch marking
  - business name and address of vendor, manufacturer, packer or importer
  - country of origin
  - nutrition table
  - allergen or warning statements
  - declaration of alcohol by volume (if alcohol present).
- For more information on food labelling and food recalls please see the *Food Standards Australia and New Zealand* website <www.foodstandards.gov.au/>.
- For further information on food recalls please see the support program section of your food safety program.

Support programs

#1 Food allergens, intolerances and general information for customers

Issues

1. Some people have a reaction to food containing allergens. These people may buy food from you they do not react to, but the food may be cross-contaminated with allergens from foods they do react to.

Cross-contamination from allergens	
What can I do?	• Manage food preparation and display to prevent cross-contamination from food containing allergens. When handling foods that contain known allergens, take extra care not to contaminate other foods or equipment.
How can I check?	• Observe storage, preparation and display practices to avoid the risk of allergen contamination.
What if it is not right?	• Inform staff about the importance of always using clean and of avoiding cross-contamination of food and equipment, particularly when staff switch from working with foods containing allergens to other foods during the same preparation session. • If non-allergenic food may be contaminated with an allergen, make sure that it is not used in the preparation of food that is intended to be allergen-free. • If food may include allergens, follow the instructions on the following pages about making information available to customers and staff.

Support programs

#1 Food allergens, intolerances and general information for customers

2. Cleaning might not be preventing cross-contamination of foods containing allergens without foods.

Cleaning	
What can I do?	• Thoroughly clean and sanitise equipment and work areas. • Ensure staff clean and sanitise all equipment and surfaces that come into contact with allergens.
How can I check?	• Ask staff whether they understand how to prevent cross-contamination during cleaning.
What if it is not right?	• Include clear instructions in your cleaning arrangements to prevent cross-contamination during cleaning.

Support programs

#1 Food allergens, intolerances and general information for customers

3. Not meeting requirements in the Australia New Zealand Food Standards Code to include important information for customers about allergens. Failure can cause harm to some customers and may mislead others.

Allergens	

What can I do?	• Make sure the presence of allergens is declared on any food that is required to bear a label. For example, pre-packaged food you sell that you received in that package from another food business, or that you made and packaged at another site.
	• Where the food is not required to be labelled, provide information about any allergens:
	  ○ on the label (if you choose to label the food) or
	  ○ next to or associated with the display of the food (for example, use a sign or ticket or a brochure) or
	  ○ provide it to a purchaser or customer upon request.
	• Keep a copy of the ingredient information of any foods that have been removed from their original packaging or labelling.

How can I check?	• Check that label and product information is accurate and meets the requirements. • Inspect labels of ingredients for the presence of allergens. • Review practices and labels regularly, especially for new foods. • Check ingredients listed in items on menus. • Make sure information about allergens is displayed or available on request about ready-to-eat food that is served to customers or is on display.
What if it is not right?	• Change practices and re-label food so that any label complies with the Code. • Revise information so it is correct. • Insist on getting accurate information about ingredients from your suppliers.

Support programs

#1 Food allergens, intolerances and general information for customers

4. Not meeting requirements of the Australia New Zealand Food Standards Code to include other important information for customers about the product. Such as, the name of the food, the direction for use, or storage, included on the food label.

Provision of information	
What can I do?	• The Code applies in different ways, depending on how food is handled and sold on site. Read and follow the advice that applies to you in the 'Food labelling and information requirements'.
How can I check?	• Check that practices and labels meet the requirements that apply to your business. Review regularly, especially for new foods.
What if it is not right?	• Change practices and labels so that they comply with the Code.

Support programs

#1 Food allergens, intolerances and general information for customers

5. Customers may ask about whether a food has allergens or contains ingredients which they have a intolerance to and staff may not know what to tell them. This could be about foods listed in the 'what foods cause allergic reactions or food intolerances' the "what are the risks" part of this section, or foods that your customer reacts to. Untrained staff could provide incorrect information which could cause harm to some customers.

Staff training	
What can I do?	• Inform staff about the importance of providing accurate information about food and the ingredients in food. • Make accurate information about the food and all ingredients available to your staff for them to refer to when serving food or when a customer inquiries about any ingredients or allergens.
How can I check?	• Check staff knowledge and understanding of known allergens, and what allergens and ingredients are present in the food being served.
What if it is not right?	• Re-train staff on allergens and ensure that they can provide accurate information to customers about the food and what allergens and ingredients are present. Require that they check if they are not sure.

Support programs

#1 Food allergens, intolerances and general information for customers

Allergen awareness	

What can I do?	• When naming food for display or on a menu, where possible include known allergens or include specific ingredients in the description of the food (for example, 'fish with almond butter').
	• Inform customers about any food that may contain allergens. If customers request food suitable for special dietary requirements due to allergies or food intolerances, or other food that the customer reacts to, either:
	  ○ ensure your business complies with the request or,
	  ○ if you cannot do so, explain this to your customer, so they know not to purchase the food.
	• Do not put your customers' health or life at risk.

How can I check?	• Check allergen information on displays or your menu is correct. • Check staff knowledge and understanding of known allergens, and what allergens and ingredients are present in the food being served.
What if it is not right?	• Redo your displays or menu with all the correct allergens. Re-train staff on allergens and ensure that they can provide accurate information to customers about the food and what allergens and ingredients are present. Require that they check if they are not sure.

Support programs

#1 Food allergens, intolerances and general information for customers

What are the risks?

- Some people have a reaction to food containing allergens. People's reactions to food allergens vary but they can be severe and even life threatening. Some people can have a severe reaction to even the smallest trace amount of certain allergenic foods.
- People's reactions to food intolerances are commonly less severe but eating these foods can make them unwell.

Victorian food laws require that your business complies with the Australia New Zealand Food Standards Code (the Code). You must understand and follow the requirements of the Code, including Standards 1.2.1 and 1.2.3. Visit <http://www.foodstandards.gov.au> for information on the current national standards.

What foods or ingredients cause allergic reactions or intolerances?

Allergens are foods known to cause reactions in allergic people due to an immune response. This can be life threatening.

Allergens in foods must be clearly communicated to customers.

As distinct to food allergies, some people experience intolerance to certain foods or ingredients due to a chemical reaction. People's reactions to food intolerances are commonly less severe, but eating these foods can make them unwell.

The most common causes of food allergic reactions or food intolerances are:

- cereals containing gluten and their products, that is: wheat, rye, barley, oats and spelt and their hybridised strains, other than where these substances are present in beer and spirits and in some cases glucose syrups as described in Standard 1.2.3-4 of the Code
- shellfish, crustaceans and their products
- eggs and egg products
- fish and fish products
- milk and milk products
- peanuts and peanut products
- soybeans and soybean products
- sesame seeds and sesame seed products
- tree nuts and tree nut products (this does not include coconut)
- lupin and lupin products
- added sulphites in concentrations of 10 mg/kg or more (typically in dried nuts, soft drinks and sausages).

NOTE: The term 'products' means foods that have this item in their ingredients.

Support programs

#1 Food allergens, intolerances and general information for customers

The Code requires that the presence of any of these products in a food must be declared when present as:

- an ingredient
- an ingredient of a compound ingredient
- a food additive or component of a food additive
- a processing aid or component of a processing aid.

Food labelling and information requirements

The Code includes labelling and information requirements for food. The requirements vary depending upon the nature of the activity and the type of food, such as whether it is packaged and what is required if it is packaged.

Most businesses using food safety program template this template will be small to medium-sized businesses preparing ready-to-eat food for immediate consumption, to be consumed on site, or as takeaway by the customer. The information below summarises key requirements in the Code that these businesses must follow for these activities.

Information requirements about food which is ready for immediate consumption by a customer on-s or as take-away by the customer

Labelling

This food is NOT required to have a label if any of the following apply:

- the food is not in a package (such as fruit or vegetables, or ready-to-eat food that is served)
- the food is made and packaged at the premises from which it is sold (such as any sandwiches, bread or hot food prepared at the food premises and sold in a package)
- the food is packaged in the presence of the purchaser (such as being placed in a bag)
- whole or cut fresh fruit or vegetables (other than sprouting seeds or similar products) are sold in mesh bags or clear plastic, or other packaging that does not obscure the nature of the food
- the food is delivered packaged, and ready for consumption, at the express order of the purchaser
- the food is displayed in a cabinet from which a person serves food as requested by the purchaser
- the food is sold to the public at a fundraising event (which raises funds solely for a community or charitable cause and not for personal financial gain).

For example:

- you run a deli, and you put the deli items in a bag or container in the presence of a customer
- you run a cafe or restaurant, and you only prepare and serve ready-to-eat food
- you run a sandwich bar, and you make and package your sandwiches on-site and sell them at the sandwich bar
- you run a bakery, and you package your bread on-site for direct sale to customers at the bakery.

Information requirements for food that is not required to bear a label

In the above situations, the Code still requires that you make some important information available to

Support programs

#1 Food allergens, intolerances and general information for customers

the purchaser, such as:

- Name of the food – this must indicate the true nature of the food, so the purchaser knows what they are buying.
- Display information on any label (if food is packaged and you must or choose to label) **or** next to or associated with the display of the food (for example use a sign, ticket or brochure) **or** provide to the purchaser on request.
- Directions for use or storage – but only if food is of such a nature as to warrant such directions for reasons of health and safety. (This will not be the case if the food is intended to be eaten on-site or straight away when purchased.)
    - On any label or in information accompanying the food.
    - Example: for packaged high-risk food that is expected to be stored and will be reheated by the purchaser later at home - 'Keep refrigerated and cook as directed'.

You must comply with these requirements.

The information is based on key requirements of the Code, as of June 2014.

To check for any future updates on these requirements go to the FSANZ website <http://www.foodstandards.gov.au>.

If you handle foods in different ways to described here, check the FSANZ website for more specific requirements about labelling and the provision of information to customers. For example, if:

- you pre-package food at one place to sell at another
- you wholesale food
- you sell raw bamboo shoots or cassava (for customers to take-away)
- you use substances such as lactitol or maltitol, or kava or royal jelly
- you formulate caffeinated beverages (this does not include making and serving tea of coffee or selling or serving cans of drink)
- food is produced using gene technology
- you make nutrition, health or related claims
- you sell raw meat, offal, or fish to customers
- you prepare food and supply it to someone else who offers it or uses it to prepare food for immediate consumption (such as a caterer, restaurant, canteen, school or hospital).

Support programs

#1 Food allergens, intolerances and general information for customers

Tips

- Set aside a time or work area that is used solely for the preparation of allergen-free foods and use separate utensils for foods that are designated to be allergen-free.
- If you are placing your own food business label on a pre-packaged item that is already labelled, make sure you don't cover the existing label as it contains important information for consumers.
- To find out more about allergens and food intolerances and how you can help customers with questions about them, visit <https://www.health.vic.gov.au/food-safety/food-allergen-awareness>.
- For more information on the current national standards on food labelling and allergens, visit the Food Standards Australia New Zealand website <http://www.foodstandards.gov.au>.

Support programs

#2 Cleaning and sanitising

Issues

1. Food may be contaminated if premises, equipment, vehicles, containers and cleaning cloths cleaned and sanitised properly.

Effective cleaning	
What can I do?	• Ensure appropriate cleaning products and equipment are used. • Ensure effective cleaning arrangements are developed and implemented. Staff should know how to clean, what to clean, and when to clean. • Ensure staff have the required skills. • Replace cleaning cloths and cleaning equipment regularly.
How can I check?	• Confirm cleaning product details with manufacturers. • Confirm contents and implementation of cleaning arrangements. • Observe staff cleaning practices.
What if it is not right?	• Review cleaning products and change them if they are not adequate. • Review and modify cleaning arrangements. • Conduct staff training. Ensure staff know what needs to be done. • Raise poor cleaning practices with staff.

Support programs

#2 Cleaning and sanitising

What are the risks?

- Food may be contaminated and become unsafe to eat if the food premises, food preparation equipment, food vans and any food transport vehicles and containers are not cleaned and sanitised properly.
- Dirty equipment used in food preparation may transfer bacteria and cause food poisoning.
- Dirty cloths can spread bacteria in food preparation areas. Bacteria from cleaning cloths could spread to food preparation areas if staff do not follow basic hygiene practices.
- Most food poisoning bacteria are killed if they are exposed to chemical sanitisers, heat or a combination of both.

Support programs

#2 Cleaning and sanitising

Tips

Cleaning tips

Six steps for food contact surfaces and equipment

1. Pre-clean – scrape, wipe or sweep away food scraps and rinse with water.
2. Wash – use hot water and detergent to remove grease and dirt and soak, if needed.
3. Rinse – rinse off any loose dirt or detergent foam.
4. Sanitise – use a sanitiser to kill remaining germs.
5. Final rinse – wash off sanitiser (read the instructions on the sanitiser container to see if you need to do this).
6. Dry – allow to air dry.

Other tips

- Create a cleaning schedule to keep track of what must be cleaned and when. It should set out the cleaning arrangements and tasks so that staff members know how often each job must be done, how it should be done, and who should do it, including:
    - the floors, walls and ceilings of all areas of the business, from the front door to the delivery area
    - all extractor fans, kitchen equipment, display units, refrigerators and storage areas
    - the cleaning equipment itself (broken equipment should be reported and replaced)
    - a timeframe that ensures there is no build-up of rubbish, recycling material, food waste or dirt and grease on any of the equipment and any vehicles used to prepare, sell or transport food.
- Operate a clean-as-you-go policy and clean all spillages immediately. Provide cleaning materials, equipment and cleaning agents to clean effectively.
- Use clean or disposable dishcloths. Wash cloths in hot water and detergent after every use and sanitise dishcloths regularly. Replace cloths regularly during each shift. Single-use paper towels are safer than cloths.
- Ensure staff members wash their hands after cleaning and change their gloves and protective clothing before returning to prepare or handle food.

Sanitising and chemical usage tips

- Know what your cleaning products are designed for and how to get the best from them before you use them. If you use cleaning products that are not chlorine-based, read the information from the manufacturer to check the effectiveness of the product.
- Check with your chemical supplier for advice about what cleaning agents are suitable for your food premises, vehicles, food contact surfaces and equipment.
- Follow the manufacturer's instructions when using a sanitiser. Some sanitisers work as a detergent and a sanitiser, and some may need to be applied more than once when used for heavy cleaning work.
- Clean surfaces before sanitising. Unclean surfaces cannot be sanitised. Sanitising small equipment may be done via heat or steam. Heat the surface to above 77 °C with boiling water or spray or swab the surface with a food surface chemical sanitiser. Work surfaces and food

Support programs

#2 Cleaning and sanitising

contact surfaces can be sanitised using chemical sanitisers where it is not appropriate to use heat.

- Sanitise smaller items using a dishwasher that operates a wash cycle at 80 °C. If your dishwasher does not have this function, immerse small items for 30 seconds in a solution containing 50 ppm chlorine at 50 °C or equivalent. Dishwasher filters need to be cleaned, and the dishwasher also needs to be cleaned and sanitised.
- Make up your bleach and water solutions every 24 hours because the chemical breaks down and becomes ineffective after this time. Prepare solutions away from food and food preparation areas. Old batches or out-of-date chemicals should be disposed of safely.
- To sanitise equipment at 100 parts per million chlorine, use appropriate bleach and water solution ratios: 2.5 ml (1/2 teaspoon of bleach) to 1 litre of water for household bleaches or 1 ml of bleach to 1 litre of water for commercial bleaches. (Check ratios on product labels or with your supplier).
- Change types of sanitiser on a regular basis, especially non-chlorine-based cleaning chemicals, as some bacteria can become resistant to the active agents.
- Store chemicals in clearly labelled containers that are free from damage or leaks and away from food. Keep them in a designated area separate from food preparation and food storage areas. Never store chemicals in food or drink containers.

Support programs

#3 Supervision of food handlers

Issues

1. Food safety may be at risk if staff are not supervised and managed appropriately.

Food safety supervisor training	

What can I do?	• Ensure the business has at least one food safety supervisor (FSS). A class 2 community group is not required to have a FSS under the Victorian *Food Act 1984*, if the group:
	  ○ only operates a food premises or vehicle for a maximum of two consecutive days or less at any one time, **and**
	  ○ **those handling the food are mostly volunteers.**
	• However, the community group may still choose to have a FSS if they wish. They may also be required to do so by other organisations or supplier requirements.

How can I check?	• Check that appropriate policies, procedures, staff training and operational systems are in place. • The FSS must be able to recognise and prevent food safety risks and be able to supervise other people handling food. • You must be able to provide the name and qualifications of your current FSS to your council if requested to do so. Include details of the minimum competency codes.
What if it is not right?	• Make sure your food safety supervisor has the right competencies – see: https://www.health.vic.gov.au/food-safety/food-safety-supervisors • Ensure that staff handling food know that they must follow the FSS's advice about how to handle food safely. • Modify policies and procedures, staff training and operational systems as appropriate.

Support programs

#3 Supervision of food handlers

2. Staff do not know how to handle food safely.

Train and manage food handlers	
What can I do?	• Ensure staff members understand the circumstances that may lead to food being unsafe and what action they can take to avoid it. By: o providing information about food hygiene and personal hygiene techniques o providing information about preparing and managing specific foods based on the tasks staff perform o making sure staff understand and can implement cleaning schedules, record keeping and food recall procedures o making sure staff understand the operating and cleaning requirements of equipment, including how to use and clean thermometers.
How can I check?	• Observe the personal hygiene and food handling practices of all staff.
What if it is not right?	• Improve staff supervision and training. • Address non-compliant staff behaviour.

Support programs

#3 Supervision of food handlers

3. Food safety may be at risk if staff are ill and/or do not use good personal hygiene practices.

Good handling practices	

What can I do?	• Inform staff:
	  ○ that they must report any food-related illness and ensure they
	  ○ understand the risks of continuing to work when ill.
	  ○ that they must take additional precautions not to contaminate
	  ○ food when they return to work after an illness about the importance of hand washing in preventing food contamination.
	• Ensure staff wash their hands frequently, including when they have been:
	  ○ to the toilet
	  ○ handling any food that may potentially contaminate other food
	  ○ products (including raw ingredients and foods containing
	  ○ allergens)
	  ○ eating or drinking
	  ○ smoking, licking fingers, biting nails, touching pimples or sores
	  ○ coughing, sneezing, using a handkerchief or disposable tissue
	  ○ disposing of, or handling, waste
	  ○ handling animals
	  ○ handling anything other than food (for example, money, cleaning cloths, cleaning equipment)
	  ○ away from the workplace (such as starting a shift or returning from a break.
	  ○ away from the workplace (such as starting a shift or returning from a break).

How can I check?	• Observe the personal hygiene and food handling practices of all staff. • Be alert for symptoms of any food poisoning or gastroenteritis-type illness (gastro) or foodborne disease. • If someone has been off work due to illness, check they have a medical certificate that states they no longer suffer from, or are not a carrier of, a foodborne disease.
What if it is not right?	• Improve staff supervision and training. • Address non-compliant staff behaviour. • Exclude food handlers who have certain symptoms from the food handling business for up to 48 hours after their symptoms cease. This includes diarrhoea, vomiting, sore throat with fever, and fever or jaundice.

Support programs

#3 Supervision of food handlers

What are the risks?

- Inadequate staff supervision and leadership within a business may result in poor food handling practices and standards.
- Members of the public may consume contaminated or unsafe food and become unwell.

Support programs

#3 Supervision of food handlers

Tips

- Steps you can take to ensure staff members understand what may lead to food being unsafe, and action they can take to avoid it, include:
  - informing new staff about your business' food safety program
  - developing and implementing a training plan for staff. See DoFoodSafely, the Department of Health's free, online, food handler's learning program at <www.dofoodsafely.health.vic.gov.au>.
- Keep records of staff illness (for example, note in your business diary whether the staff member was absent due to a gastro-related illness). Authorities may require this information after a food-related incident or outbreak.
- Check the Department of Health's Public Health web pages for more information at <https://www.health.vic.gov.au/public-health/infectious-diseases-guidelines-and-advice> . Keep up to date with food safety requirements by regularly checking the Food Safety web pages at: < https://www.health.vic.gov.au/public-health/food-safety>.
- Put up posters near sink areas to remind staff to wash their hands.
- Lead by example – wash your hands frequently.

Support programs

#4 Food handlers' responsibilities

Issues

1. Food safety may be at risk if staff are ill and/or do not use good personal hygiene practices.

Managing staff illness	

What can I do?	• Inform staff:
	  ○ that they must report any food-related illness and ensure they understand the risks of continuing to work when ill.
	  ○ that they must take additional precautions not to contaminate food when they return to work after an illness.

How can I check?	• Observe the personal hygiene and food handling practices of all staff. • Check staff are aware they must not come to work if suffering from any food-related illness.
What if it is not right?	• Improve staff supervision and training. • Address non-compliant staff behaviour. • Develop and implement a staff training plan.

Staff responsibilities	
What can I do?	• Inform staff of their responsibilities when handling food. Ensure they follow your food safety program. • Inform visitors of personal hygiene rules.
How can I check?	• Observe the personal hygiene and food handling practices of all staff.
What if it is not right?	• Improve staff supervision and training. • Address non-compliant staff behaviour. • Develop and implement a staff training plan.

Support programs

#4 Food handlers' responsibilities

Good hand washing practices	

What can I do?	• Inform staff about the importance of hand washing in preventing food contamination.
	• Ensure staff wash their hands frequently, including when they have been:
	  ○ to the toilet
	  ○ handling any food that may potentially contaminate other food products (including raw ingredients and foods containing allergens)
	  ○ eating or drinking
	  ○ smoking, licking fingers, biting nails, touching pimples or sores
	  ○ coughing, sneezing, using a handkerchief or disposable tissue
	  ○ disposing of, or handling, waste
	  ○ touching animals
	  ○ handling anything other than food (for example, money, cleaning cloths, cleaning equipment)
	  ○ away from the workplace (starting a shift or returning from a break).
	• Ensure staff know how to effectively wash their hands

How can I check?	• Observe the personal hygiene and food handling practices of all staff.
What if it is not right?	• Improve staff supervision and training. • Address non-compliant staff behaviour. • Develop and implement a staff training plan. • See <dofoodsafely.health.vic.gov.au>, the free online food handler's learning program.

Support programs

#4 Food handlers' responsibilities

Good personal hygiene habits	
What can I do?	Ensure that all staff who handle food: • bathe or shower regularly • keep fingernails trimmed, clean and free from nail polish • avoid touching their nose, mouth, hair and skin during food preparation • do not cough, spit or sneeze directly onto any food • tie back long hair and wear head gear (such as hats or disposable hair nets) to prevent hair getting into food • use disposable tissues to blow their noses and wash their hands after each use • wear minimum jewellery (a plain wedding band is acceptable) • do not wear uniforms outside the food area • wear suitable protective clothing while preparing and handling food • use disposable gloves appropriately • do not change clothes or eat or drink in food preparation areas • cover cuts or sores with a bright coloured (preferably blue) waterproof adhesive bandage.
How can I check?	• Observe the personal hygiene and food handling practices of all staff.
What if it is not right?	• Improve staff supervision and training. • Address non-compliant staff behaviour. • Develop and implement a staff training plan. • See <dofoodsafely.health.vic.gov.au>, the free online food handler's learning program.

Support programs

#4 Food handlers' responsibilities

What are the risks?

- Food handlers who have poor personal hygiene practices or may be sick can contaminate the food they handle.
- Food handlers with poor hand washing knowledge or practice may contaminate foods which may result in food poisoning of customers.

Support programs

#4 Food handlers' responsibilities

Tips

Four steps for effective hand washing:

1. Use soap to work up a lather.
2. Wash palms, fingers, thumbs, nails and wrists. Use a clean nail brush if necessary.
3. Rinse off soap by washing hands under warm running water for at least 20 seconds.
4. Dry with paper towel then air dry. Never wipe wet hands on clothes, uniforms or aprons to dry them.

Ensure that all staff complete dofoodsafely.health.vic.gov.au, the department's free online food handler' learning program, or other relevant food handling training programs.

Support programs

#5 Thermometers and equipment

Issues

1. If adequate hand washing facilities are not available, food may be contaminated.

Hand washing facilities	
What can I do?	• Ensure hand washing facilities are available at buildings and in food vans where food is prepared or sold; this includes warm running water, soap and single-use towels. • Wash and dry any non-disposable towels after each use. • Supply a container for used towels near the hand washing facility. For further information ask your local environmental health officer. • If you are operating a stall, or similar set up where full hand washing facilities cannot be supplied, check the **Food vans, stalls, events and off-site catering** section of this template for advice about how food handlers can keep their hands clean.
How can I check?	• Check facilities, including whether soap and towels are restocked.
What if it is not right?	• Make sure handwashing facilities are maintained and restocked regularly.

Support programs

#5 Thermometers and equipment

2. If equipment is not operating effectively, it may be difficult to clean. This can cause food to be contaminated or not be prepared safely.

Equipment maintenance	
What can I do?	• Maintain equipment and replace when defective. Some equipment, such as slicers and mincers, must be regularly checked to ensure they are operating safely and can be adequately cleaned. • Make sure pest control screens and refrigerators are always working properly to maintain the safety of the food you produce. • Make sure equipment, such as weighing scales, are calibrated or adjusted so that they are reliable and accurate.
How can I check?	• Check equipment regularly.
What if it is not right?	• Replace or adjust equipment as necessary.

Support programs

#5 Thermometers and equipment

3. If thermometers are not accurate, food may be in the temperature danger zone of 5 °C to 60 °C allow food poisoning bacteria to grow.

Thermometer accuracy	
What can I do?	• Have probe thermometers calibrated annually or as per the manufacturer's specifications (they should measure potentially hazardous food to +/-1 °C). • If you are using remote temperature monitoring IT systems, check that all temperature probes are replaced when damaged or malfunctioning.
How can I check?	• Conduct cold temperature and/or hot temperature testing. Record results in **Record 5: My probe thermometer accuracy checks**. • Have equipment calibrated by the manufacturer, supplier or external contractor. • If using an automated system, ensure that calibration is included in any service agreements.
What if it is not right?	• Have faulty probe thermometers repaired or replaced.

Support programs

#5 Thermometers and equipment

4. Thermometers may contaminate food if not cleaned and sanitised properly.

Adequate cleaning	
What can I do?	• Clean and sanitise probe thermometers before and after each use. • When inserting a probe into food, clean and sanitise after each item of food is checked. • Use alcohol swabs available from chemists, or another suitable form of cleaning.
How can I check?	• Inspect probe thermometers to see whether they have been cleaned and sanitised.
What if it is not right?	• Modify cleaning and sanitising practices. • Remind staff to clean and sanitise probe thermometers before and after each use.

Support programs

#5 Thermometers and equipment

5. Thermometers must be available and used correctly to check that food is kept at the correct temperature to prevent the growth of food poisoning bacteria.

Use of equipment	
What can I do?	• Keep thermometers easily accessible at your business premises. If you have several premises (such as a shop and a food van) have a thermometer at each of them. • Use a thermometer that can be inserted into the food to measure its temperature in the middle. (This means the thermometer must have a probe.) Take the core temperature of the food by inserting the probe into the centre of the food. • Do not use thermometers attached to cool rooms, hot holding units and sandwich display units when checking the temperature of food (these thermometers measure the operational temperature of the unit, but not the actual temperature of the food).
How can I check?	• Check that thermometers are being used correctly.
What if it is not right?	• Remind staff how to use thermometers, and the dangers of incorrect usage.

Support programs

#5 Thermometers and equipment

What are the risks?

- Without an accurate probe thermometer or temperature measuring device, you may not know
  - whether high-risk foods:
  - have been sufficiently cooked
  - are being kept at the correct temperature in a refrigerator or display unit
  - are being cooled and reheated safely are at the correct temperature when they arrive at your business.
- A probe thermometer may contaminate food if it is used incorrectly or not cleaned properly.
- Allergenic foods may be contaminated by other foods if thermometers are not cleaned effectively. You may decide to have dedicated thermometers for different types of allergenic foods.
- Probe thermometers are sensitive pieces of equipment. They may break or lose accuracy if they are dropped or roughly handled.
- You must keep high-risk foods at 5 °C or colder (cold foods) or at 60 °C or hotter (hot foods) when being stored, displayed and transported. Other time and temperature requirements apply to the cooking and reheating of cooked high-risk foods. These are described in other sections of this food safety program template.

Support programs

#5 Thermometers and equipment

Tips

Maintenance of equipment

- Create a maintenance schedule to track when equipment has been serviced and note when the next service is due. You may wish to note it in your business diary as well.

Use of equipment

- Ensure that all the equipment you use in your premises is operated in accordance with the manufacturer's instruction booklet or operating manual. This includes all equipment used in your business – such as cooking equipment, blenders, vitamisers and cutters. If you do not have the operating manual for a piece of equipment you should obtain it. Manuals can typically be downloaded from the internet or obtained directly from the manufacturer.
- An example of where manuals are important is in the case of conveyor-belted ovens. These are commonly used to cook pizzas. They can also be used to cook a wide variety of other foods. They are designed to put food through the oven once, after the operator has made sure that the settings for the cooking time and the temperature are appropriate for the type of food being cooked. These ovens have been incorrectly used in the past, which has led to foods being cooked inadequately, or put through the oven more than once on the wrong temperature. Outbreaks of illness resulted when the operating manual was not available on-site.
- To ensure food is thoroughly cooked, it is critical that equipment is used in accordance with the manufacturer's specifications at all times.

Probe thermometers

- Use a probe thermometer that is accurate to +/–1 °C. This means that when the thermometer reads 5 °C, the actual temperature of the food is between 4 °C and 6 °C. The accuracy of the thermometer will be stated in the documents or packaging that came with it. If you don't have any documents, contact the thermometer's manufacturer and ask about its accuracy.
- Purchase thermometers from companies that supply probe thermometers or electronic testing equipment.

Using a probe thermometer

- Before reading the temperature wait approximately 30 seconds until the temperature reading stabilises.
- Measure the surface temperature of vacuum packed or frozen foods by placing the length of the probe thermometer between two vacuum packs or frozen items.

Support programs

#6 Pest control

Issues

1. Contamination of food by pests and other animals.

Pest control	
What can I do?	• Prevent pests from entering premises. • Design and maintain the premises and vehicles so that pests cannot get into any place where there is food or any place where they can nest or breed. Install screens on doors and windows that can be opened. Install pest exclusion strips on doors. • Make sure that buildings with kitchens where the dining areas are open to the street are insect and vermin proof. • Install door and window fittings to secure food areas. • Remove rubbish and store securely. • Protect food and ingredients from pests. • Engage a pest control monitoring service or create your own plan to check for pest activity and take action as necessary.
How can I check?	• Regularly inspect premises, vehicles, food storage areas and rubbish storage areas for signs of activity by pests. • Read and act on pest controller reports if a contractor is used.
What if it is not right?	• Repair premises and food and rubbish storage areas. • Increase pest controls by reviewing current control measures. • Promptly treat any pest infestation, including maintenance work or cleaning. • Set up more bait stations or seek professional help to reduce pest activity.

Support programs

#6 Pest control

Animals in food areas	

What can I do?	• Do not allow live animals in any part of the premises where food is handled except the following permitted animals:
	  ○ shellfish and fish intended for food
	  ○ dogs in an outdoor eating area if it is business policy to allow them in these areas (it is your choice).
	  ○ assistance animals (such as guide dogs, hearing guide dogs, mobility support animals, medical alert animals and psychiatric service animals). You are required by law to allow them into indoor and outdoor areas used by customers.

How can I check?	• Check to make sure prohibited animals are not allowed into the premises.
What if it is not right?	• Make sure staff and customers understand when animals are allowed in the premises. • Enforce these rules.

Support programs

#6 Pest control

What are the risks?

- Food may be contaminated by pests and be unsafe to eat. Pests include mice, rats, cockroaches, flies, ants, birds, beetles and weevils.
- Controlling pests and throwing out contaminated food can be costly for the business.

Support programs

#6 Pest control

Tips

- Safely position ultraviolet insect killers. These should not be located above food preparation benches.
- Label bait stations with the date of service and secure them to the ground.
- Use a diary or create a log sheet to record what bait was used and note any pest activity and areas that need to be cleaned or repaired to keep the premises secure from pests.
- Ensure regular pest inspections.
- Consider hiring a licensed pest controller to visit the premises regularly. Licensed pest controllers must ensure their service complies with legislative requirements and best practice guidelines for the use of pesticide. If you hire a licensed pest controller, ask them for an inspection report. This report should give written results of each visit to the food business premises.
- Protect food from possible contamination if chemicals are used for pest control.

Support programs

#7 Food recalls

Issues

1. The health of the public may be at risk if food recalls are not managed quickly and appropriately These foods may put people who eat them at risk.

Action recalls	
What can I do?	• Act immediately and follow instructions given when a food recall occurs. • Know the name and address of the suppliers of all your foods. Record this in your **Record 1: My Food Suppliers**. • Take recalled goods off the shelf, store them in a segregated area and label them not to be sold. • Ensure staff understand food recall procedures.
How can I check?	• Check that supplier or council instructions have been followed.
What if it is not right?	• Follow the recall instructions. • Make sure your supplier list is up to date.

Support programs

#7 Food recalls

What are the risks?

- The health of the public may be at risk if recalled food is not removed quickly and disposed of appropriately.

Support programs

#7 Food recalls

Tips

- If you supply food to other businesses, obtain a copy of the Food Standards Australia New Zealand (FSANZ) food industry recall protocol at: <www.foodstandards.gov.au/industry/foodrecalls/>.
- Subscribe to FSANZ on their website to receive information on food recalls from their website <www.foodstandards.gov.au/industry/foodrecalls/>.
- Keep invoices or delivery dockets that contain a prescribed name or description of the food, batch numbers, date markers or other information, wherever possible.
- When you receive a food recall notice, take immediate action to remove food from use or display in your business.
- Follow all other instructions given by the supplier or the local council.

Support programs

#8 Time control

Issues

1. Growth of food poisoning bacteria from food being in the temperature danger zone of 5 °C to 60

Time control	

What can I do?	• Use the 2 hour/4 hour rule to manage high-risk food temperatures.
	• Only use the 2 hour/4 hour rule if:
	  ○ you know the temperature history of the food
	  ○ you can show evidence that cooling processes are in line with the cooling rules in **Food handling practices 6: Cooling and freezing food**.

How can I check?	• Measure food temperatures at regular intervals during food practices, such as purchasing and receiving, preparation, displaying and serving.
What if it is not right?	• If cold or hot food is delivered in the temperature danger zone of 5 °C to 60 °C, ask the delivery person to show you evidence of the temperature of the food for the previous two hours. • Reject high-risk foods that are delivered at the wrong temperature or where evidence of the temperature is not provided. • Dispose of high-risk food that has been at room temperature for more than four hours.

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Support programs

#8 Time control

Required records

How I use the 2 hour/4 hour rule for high-risk food

To check

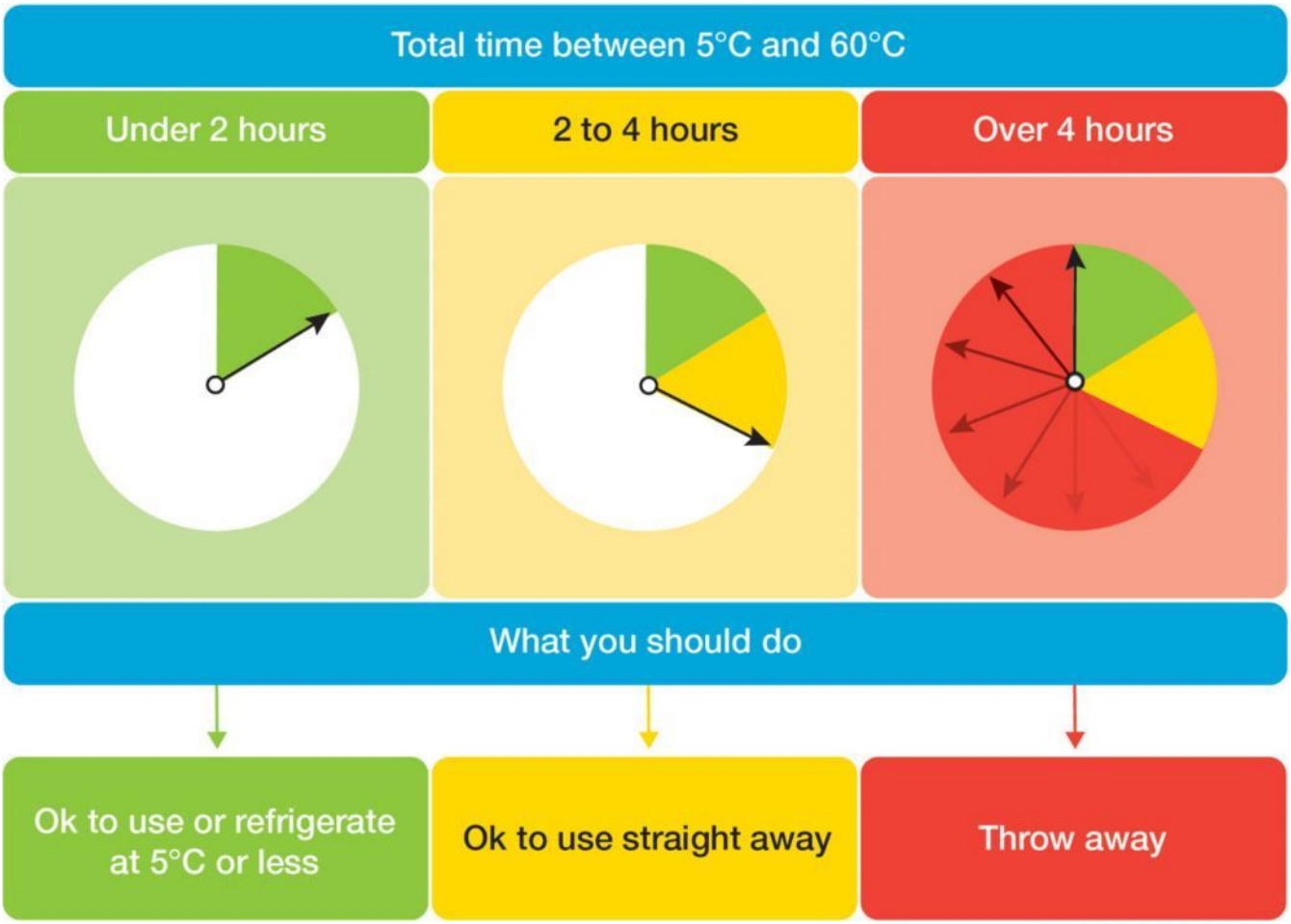
If high-risk food, that is kept out of temperature control, is safe

How often

Write down your usual practice. Update it if your practice changes.

How to complete this record

The total time includes all the time the food has been at room temperature. For example, during delivery, display, preparation and transportation. Make sure you and your staff understand how you are using this practice.



Support programs

#8 Time control

Example practice 1:

Premises: Bean and Gone Café

1. Sandwiches are prepared daily between 10.30 and 11.30am.
2. They are put on display until 2.30pm – total time out of refrigeration is four hours.
3. At 2.30pm all left over sandwiches are thrown out.

Example practice 2:

Premises: Big Belly Buffet Restaurant

Monday to Saturday

1. Freshly cooked food is transferred to the bain-marie daily at 11.50am for lunch service – food is held at 50 °C.
2. All food is brought back to the kitchen at 2.30 pm.
3. As the food has been in the temperature danger zone of 5 °C to 60 °C for longer than two hours, it is either used immediately (some staff eat it for lunch before the four-hour mark is reached) or it is thrown out.

Sunday

1. Freshly cooked food is transferred to the bain-marie daily at 11.50am for lunch service – food is held at 50 °C.
2. Leftover food is brought back into the kitchen after lunch service at 1.30pm where it cooled rapidly in shallow containers in the refrigerator for use the next day.

Note: In Example practice 2, the one hour and 40 minutes that the food is held in the bain-marie on Sunday is part of the total amount of time the food can be held in the temperature danger zone the next day. That is, on Monday, after reheating to over 75 °C, the food can be displayed for two hours and 20 minutes before being thrown out. The total time in which the food is kept in the temperature danger zone is four hours.

Support programs

#8 Time control

What are the risks?

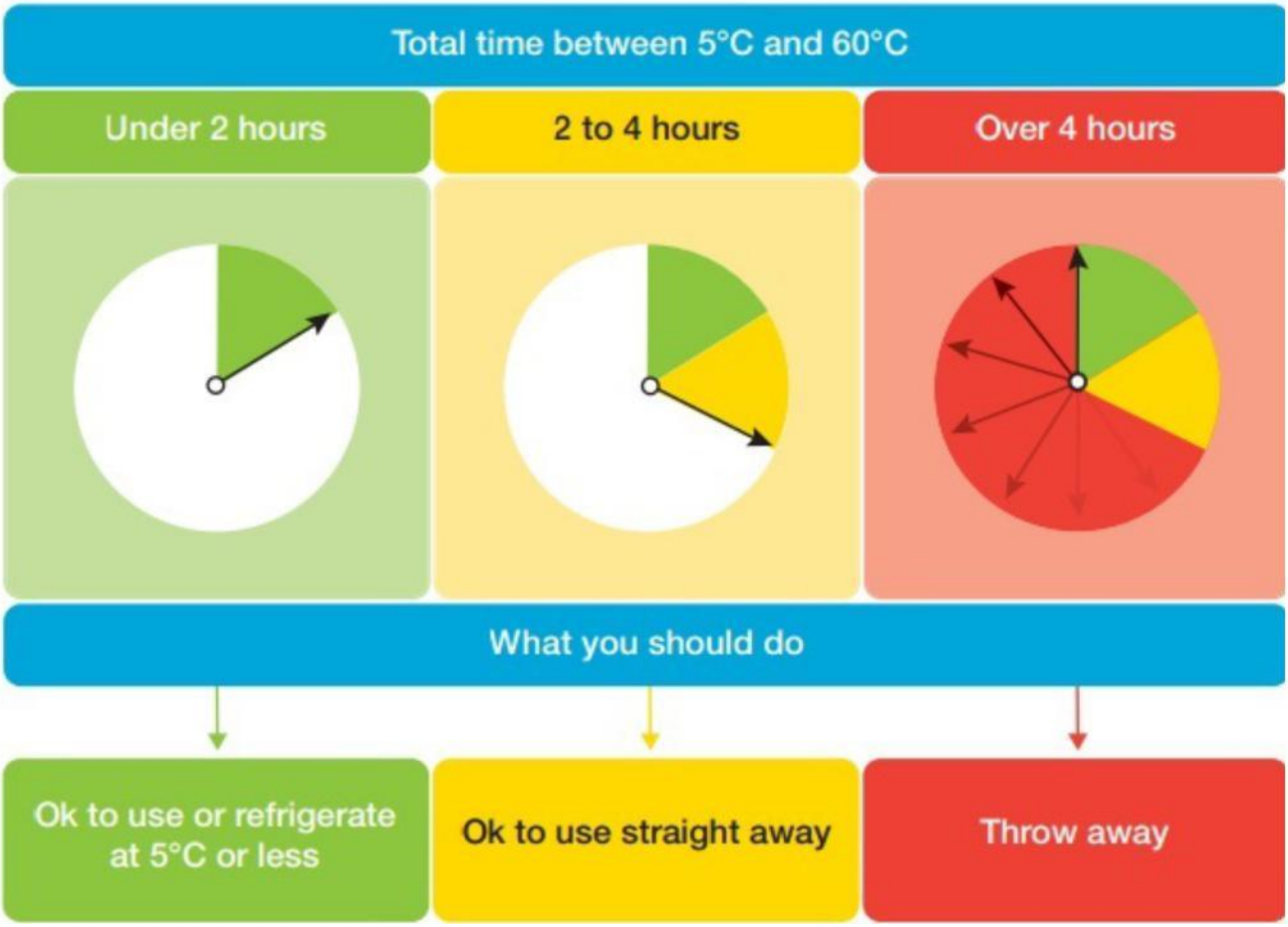
- Bacteria can multiply rapidly in food held at room temperature (that is in the temperature danger zone of 5 °C to 60 °C).
- This can cause gastro-type illnesses. Both time and temperature contribute to bacteria growth.
- Even food which looks safe and has no off odour, smell or taste can be very unsafe to eat.
- 'Best-before' and 'use-by' dates on cooked, ready-to-eat and high-risk foods will be void if the food is not kept at the recommended storage temperature.
- If your business has not stored the food as directed, you will be legally at fault if the food becomes unsafe.

What is the 2 hour/4 hour rule?

- The 2 hour/4 hour rule uses time and temperature control to keep food safe by monitoring the time that high-risk food spends in the temperature danger zone of 5°C to 60°C.
- If you are using the 2 hour/4 hour rule in your business, follow the steps below:

Support programs

#8 Time control



The total time includes all the time the food has been at room temperature, for example during delivery, display, preparation and transportation.

Before using this rule, check:

- Is the food a high-risk food?
- Was the food previously kept at room temperature? For how long?
- Are your refrigerators and hot holding equipment working correctly?
- If this food was cooked and cooled, can you prove that it was done in line with the cooling rules?
- Have you informed staff members about this rule? Do they know how to use it?
- If food is not eaten on the premises, how will you inform customers that it must be eaten within four hours?

Support programs

#8 Time control

Tips

- Place a label on the food or the tray to record the time it spends at room temperature.
- When preparing raw high-risk food for cooking, make sure that the time it is held at room temperature is kept to a minimum. Return food to the refrigerator during delays.

Support programs

#9 Waste disposal

Issues

1. The health of the public may be at risk if waste disposal is not managed appropriately.

Control waste	

What can I do?	• Manage waste food.
	• Separate waste food from foods to be used for human consumption.
	• Dispose of all food that:
	  ○ has been served to a customer and not eaten
	  ○ has been held in hot storage for longer than six hours, and you
	  ○ suspect that it is unsafe to consume
	  ○ is past its 'use-by' or 'best-before' date
	  ○ you suspect may have been contaminated by pests, dirt, dust or cleaning chemicals you are required to dispose of under an order or as a result of a food recall.
	• Clean and sanitise waste food areas.
	• Use signage that makes it clear where waste is to be disposed of.

How can I check?	• Check that staff are disposing of food that should not be used or served to customers. • Regularly inspect waste storage areas.
What if it is not right?	• Take corrective action by fixing the problems you have identified.

Support programs

#9 Waste disposal

What are the risks?

- Pests can contaminate food and food preparation areas if waste is not removed frequently. If waste food is not disposed of appropriately, it will attract pests into your premises.

Support programs

#9 Waste disposal

Tips

- Place waste disposal bins conveniently around the food preparation area.
- Clearly label waste disposal bins to make them clearly distinguishable from food storage containers.
- Use plastic bin liners in waste disposal bins in food preparation areas.
- Regularly empty rubbish bins in food preparation areas to avoid over-filling or spillages.
- Tie all bin liners before placing them in waste disposal storage.
- Clean waste disposal bins in preparation areas daily and leave overnight to air dry.
- Clearly identify the waste disposal storage area and regularly clean it.
- Ensure regular collection of waste from your premises.

Your records

Required records

Record 0 - FoodSmart Food Safety Program records

To check

Refer to instructions in each record.

How often

Refer to instructions in each record.

How to complete this record

About the FoodSmart Records section

Copies of the blank record templates are available to use from <<https://www.health.vic.gov.au/food-safety/foodsmart>.

If the format of the records provided in the FoodSmart Food Safety Program do not suit your business, you can design your own. This might include setting out the information differently. If you use an alternative record, you must make
sure that:

- you collect the same information as the example records(s) you are replacing
- your written records are in English
- if using remote IT systems to monitor cold storage, discuss this with your local council environmental health officer.

Keep your completed records onsite at your business as they must be available if requested by an authorised officer, for example, a council environmental health officer. The food safety supervisor of the business will also need to regularly review the records.

All completed records must kept for 2 years from the date of making the record.

Your records

Required records

Record 1 - My food suppliers

To check

All my suppliers

How often

It must be up to date. Ensure it includes current suppliers and also all your suppliers for the previous two years.

The minimum information required for this record is:

- An up-to-date list of your current food suppliers and all your suppliers for the previous two years. It must include the supplier's:
  - trading name
  - business address
  - contact phone number

If you pick food up from a supplier, they must also be included in this record. You can keep this information in any way you like, as long as your local council environmental health officer can see it on request and your staff can access it in your absence.

How to complete this record

This is an example of how you should fill in **Record 1: My food suppliers**.

Trading name	Business address	Contact phone number
J. Smith Smallgoods	999 Business Street, Suburb, State	9999 2000
Green Grocers	333 Business Street, Suburb, State	9999 3000

To access and use the **Record 1: My food suppliers** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 2 - My temperature checks of food in cold or hot storage

To check

The temperature of high-risk food.

How often

Check and record the temperature at least once a day of a high-risk food that is kept in each freezer, refrigerator and cool room.

The minimum information required for this record is:

- Details to clearly identify which hot or cold unit the record is for.
- The date the temperature was taken.
- Temperature of food. Cold food must be kept at 5 °C or less, frozen food at -15 °C or colder, and hot food at 60 °C or hotter. Vary the items checked over the course of the week.
- The thermometer used must be a calibrated probe-type thermometer accurate to +/-1 °C. Refer to **Record 5: My probe thermometer accuracy checks** on how to calibrate your thermometer.
- Any corrective action that you have taken.
- If you are keeping the record for more than one location, make sure it is clear which premises, van, stall or off-site location it relates to.

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 2** template if you do not already have this information in existing records.

How to complete this record

Example 1

Premises:	City Restaurant	
Unit name:	Cool room	
Week starting: / /20	**Temperature of food (1 x item)**	**Corrective action taken (if temperature wrong)**
Sunday	*3* °C.	
Monday	*4* °C.	
Tuesday	5 °C.	
Wednesday	*4* °C.	
Thursday	6 °C	Temperature adjusted.
Friday	*3* °C.	
Saturday	5 °C	

Your records

Example 2

Premises:	Food van (Rego TVL 341)	
Unit name:	Food van fridge	
Week starting: / /20	**Temperature of food (1 x item)**	**Corrective action taken (if temperature wrong)**
Sunday	*10* °C.	Fixed by technician
Monday	*4* °C.	
Tuesday	5 °C.	
Wednesday	*4* °C.	
Thursday	6 °C	Temperature adjusted.
Friday	*3* °C.	
Saturday	5 °C	

Example 3

Premises:	Stall / marquee	
Unit name:	Pie warmer	
Week starting: / /20	**Temperature of food (1 x item)**	**Corrective action taken (if temperature wrong)**
Sunday	N/A	
Monday	N/A	
Tuesday	N/A	
Wednesday	N/A	
Thursday	52 °C	Pies microwaved and returned to warmer. Core temperature is now 76 °C. Updated practice communicated to all staff.
Friday	*64* °C.	
Saturday	65 °C	

Your records

Example 4

Premises:	Catering for parties	
Unit name:	Soup tureen	
Week starting: / /20	**Temperature of food (1 x item)**	**Corrective action taken (if temperature wrong)**
Sunday	N/A	
Monday	N/A	
Tuesday	N/A	
Wednesday	N/A	
Thursday	82 °C	
Friday	78 °C	
Saturday	66 °C	

To access and use the **Record 2 - My temperature checks of food in cold or hot storage** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 3 - My cooking temperature checks

To check

The cooking temperature reaches 75 °C or above.

How often

At least once a month.

The minimum information required for this record is:

- The date the temperature was taken
- The food item - vary the items checked over the course of the year. Whole cuts of fish or steak can be cooked to preference and do not need to reach a core temperature of 75 °C. If all the food you cook is:
  - fried, you do not need to conduct this check or complete the record
  - temperature - **high-risk food must be cooked to at least 75 °C to be safe**
  - any corrective action taken to ensure food reaches more than 75 °C
  - if you are keeping the record for more than one location, make sure it is clear which premises, van, stall or off site location it relates to.

The thermometer used must be a calibrated probe-type thermometer accurate to +/-1 °C. Refer to Record **5: My probe thermometer accuracy checks** on how to calibrate your thermometer.

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 3** template if you do not already have this information in existing records.

Whole cuts of fish or steak can be cooked to preference and do not need to reach a core temperature of 75 °C.

High risk food must be cooked to at least 75°C to be safe.

Your records

How to complete this record

Record 3 - My cooking temperature check

Premises:	Restaurant		
Date	**Menu item to verify cooking temperature**	**Internal cooking temperature reached is greater than 75°C (Yes or No)**	**Any changes to cooking practice to reach greater than 75°C**
2/11/20XX	Chicken casserole	Yes	N/A
11/10/20XX	Beef Rendang curry	No	If 10L pot used, cook for 2 hours. Recipe card updated to show this.

To access and use the **Record 3 - My cooking temperature checks** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 4 - How I use the 2 hour/4 hour rule for high-risk food

To check

If high-risk food, that is kept out of temperature control, is safe

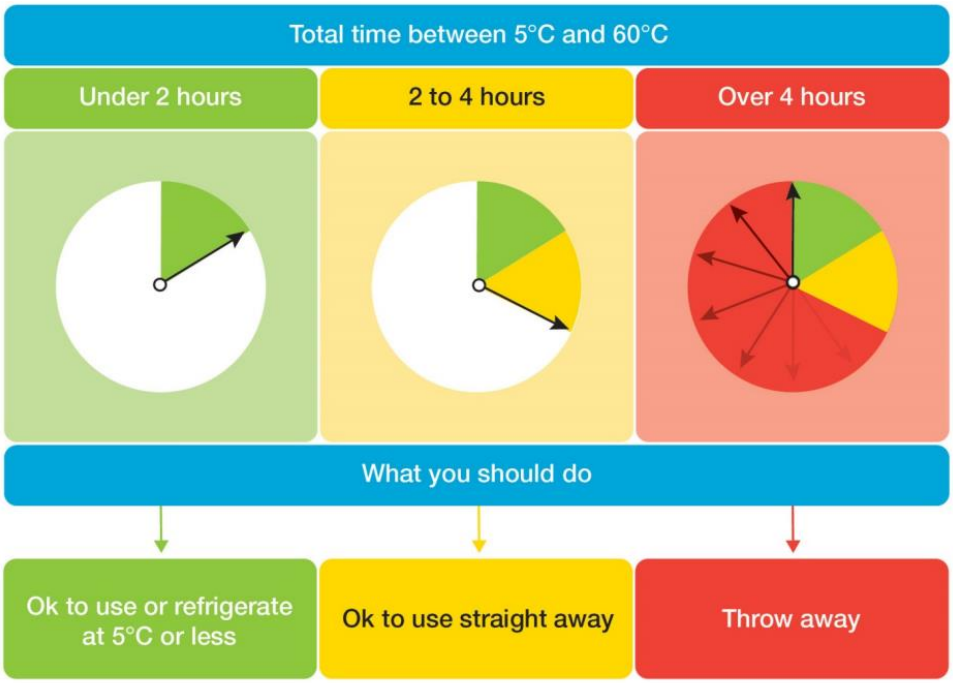
How often

Write down your usual practice. Update it if your practice changes.

Minimum information required for this record:

- If you keep high-risk food on display in the temperature danger zone of 5 °C to 60 °C, write down your
- usual practice for using the 2 hour/4 hour rule. See diagram and examples below.
- If you are keeping this record for more than one location, make sure it is clear which premises, van, stall or
- off-site location it relates to.

How to complete this record



Your records

The total time includes all the time the food has been at room temperature. For example, during delivery, display, preparation and transportation. Make sure you and your staff understand how you are using this practice.

Example practice 1:

Premises: Bean and Gone Café

1. Sandwiches are prepared daily between 10.30 and 11.30am.
2. They are put on display until 2.30pm – total time out of refrigeration is four hours.
3. At 2.30pm all left over sandwiches are thrown out.

Example practice 2:

Premises: Big Belly Buffet Restaurant

Monday to Saturday

1. Freshly cooked food is transferred to the bain-marie daily at 11.50am for lunch service – food is held at 50 °C.
2. All food is brought back to the kitchen at 2.30 pm.
3. As the food has been in the temperature danger zone of 5 °C to 60 °C for longer than two hours, it is either used immediately (some staff eat it for lunch before the four-hour mark is reached) or it is thrown out.

Sunday

1. Freshly cooked food is transferred to the bain-marie daily at 11.50am for lunch service – food is held at 50 °C.
2. Leftover food is brought back into the kitchen after lunch service at 1.30pm where it cooled rapidly in shallow containers in the refrigerator for use the next day.

Note: In 'example practice 2', the one hour and 40 minutes that the food is held in the bain-marie on Sunday is part of the total amount of time the food can be held in the temperature danger zone the next day. That is, on Monday, after reheating to over 75 °C, the food can be displayed for two hours and 20 minutes before being thrown out. The total time in which the food is kept in the temperature danger zone is four hours.

To access and use the **Record 4 - How I use the 2 hour/4 hour rule for high-risk food** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 5 - My probe thermometer accuracy checks

To check

Thermometer accuracy

How often

Annually

Minimum information required for this record:

- date
- thermometer ID, if you have more than one, name it, for example T1, T2, T3 and label it
- temperature the thermometer displays
- any corrective action taken if the temperature displayed is incorrect.

The thermometer used must be a probe-type thermometer accurate to +/- 1 °C.

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 5** template if you do not already have this information in existing records.

How to complete this record

Date	**Thermometer ID** If you have more than one, name it, for example T1, T2, T3 and label it	**Temperature °C ice water** Temperature that the thermometer displays	**Temperature °C boiling water** Temperature that the thermometer displays	**Corrective action** If the temperature is wrong, record the action taken to fix problem
01/10/20XX	T1	0 °C	97 °C	New thermometer purchased.
01/10/20XX	T2	0 °C	99 °C	N/A

Detailed below are instructions on how to complete accuracy checks. If you measure the temperature of:

- hot food, complete the boiling water check
- cold food, complete the ice water check
- both hot and cold food, complete both checks.

Ice water check

1. Mix ice and water in a container. Let it sit for a few minutes. This will chill the water to 0 °C.
2. Insert the thermometer for at least 10 seconds until the reading is stable.
3. An accurate thermometer will show a temperature between -1 °C and +1 °C.
4. If it shows a temperature greater or less than -1 °C and +1 °C, the thermometer is inaccurate and needs to be replaced.

Your records

Boiling water check

1. Boil some water.
2. Insert the thermometer for at least 10 seconds until the reading is stable.
3. An accurate thermometer will show a temperature between 99 °C and 101 °C.
4. If it shows a temperature greater than or less than 99 °C and 101 °C, the thermometer is inaccurate and need to be replaced immediately.

To access and use the **Record 5 - My probe thermometer accuracy checks** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 6 - Sushi preparation

To check

pH, temperature

How often

Record per batch of rice made. Record at time of sushi manufacture.

The minimum information required for this record is:

- Part 1 - Rice preparation
  - date
  - temperature of rice slurry
  - pH of rice slurry
  - eat used/discarded
- Part 2 - Sushi assembly
  - date and time made
  - rice temperature
  - rice pH
  - type fillings
  - temperature of fillings
  - any corrective action taken if pH or temperature is wrong.
- Part 3 - Completed sushi
  - time assembly finished
  - temperature of completed sushi rolls
  - time transport left manufacturing site
  - temperature of sushi when left the manufacturing site
  - any corrective action taken if the temperature is wrong.

If you are keeping this record for more than one location, make sure it is clear which premises, stall or off-site location it relates to. You can choose the way you keep this information, such as in the record below, in your daily business diary, or somewhere that the information can be retrieved quickly, if requested.

Your records

How to complete this record

Record 6 - Sushi preparation

Premises:	Sushi shop 1				
PART 1: Rice preparation					
Date	**Temperature of rice slurry**	**pH of rice slurry (rice + vinegar + salt/sugar)** **Check pH**		**Date used / Date discarded**	**Corrective action taken (if pH or temperature wrong)**
22/07/20XX	25 °C.	pH-4.6		Same day	
23/7/20XX	23 °C	pH-4.8		Same day	15ml of vinegar added to rice, mixed & retested. Final check pH 4.0, okay to use.
PART 2: Sushi assembly/preparation					
Date and time made	**Rice temperature and pH**	**Types fillings/name**			**Temperature of fillings**
22/01/20XX	20 °C pH 4.0	Tuna, salmon, egg			5 °C
PART 3: Completed sushi					
Time finished assembly/preparation	**Temperature of completed sushi rolls**	**Delivery/transport (Temperature of the sushi and the time the transport vehicle left the manufacturing site)**			
		Time	**Temperature**		
11am	15 °C				

To access and use the **Record 6 - Sushi preparation** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 7 - Sushi display time log

To check

Temperature and time

How often

Per batch displayed

The minimum information required for this record is:

- date
- type of sushi
- time and temperature of sushi when delivered
- time put on display
- temperature of the item in the display unit
- corrective action/time taken from display.

If you are keeping this record for more than one location, make sure it is clear which premises, stall or off-site location it relates to.

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 15** template if you do not already have this information in existing records.

How to complete this record

Premises:	Sushi shop 1							
Date	**Type of sushi/ supplier name**	**Time and temperature of sushi when delivered**		**Time put on display**	**Temperature of the display unit**		**Corrective action**	**Time taken from display**
		Time	**Temp**		**Time**	**Temp**		
22/1/14	Tuna	10.00am	15 °C	10.30am	11.00am	15 °C	None required	3.00pm

To access and use the **Record 7 - Sushi display time log** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 8 - Chinese-style roast duck drying log

To check

How long ducks are hung to dry

How often

Weekly

The minimum information required for this record is:

- date
- time drying started
- time drying finished, ducks can be hung to dry at room temperature for up to six hours
- corrective action
- time taken to be cooked, record the time the meat was taken from the drying area to be cooked.

If you are keeping this record for more than one location, make sure it is clear which premises, stall or off-site location it relates to.

Put a copy of this sheet near the drying area (check the standard preparation procedures in your food safety program).

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 15** template if you do not already have this information in existing records.

How to complete this record

Premises:				
Date	**Drying time**		**Corrective action**	**Time taken to cook (hours)**
	Time started	**Time finished**		
20/11/2013	11.00am	5.00pm	Put into refrigerator	7.00pm
27/11/2013	11.30am	3.15pm	Corrective action: Temperature check at 3.15pm should 26 °C, so moved to refrigerator. Returned to drying area at 4.30 for 1 hour. Temperature stayed below 25 °C.	5.30pm

To access and use the **Record 8 - Chinese-style roast duck drying log** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 9 – Chinese-style meats display time log

To check

The amount of time meat is on display

How often

Weekly

The minimum information required for this record is:

- meat type (duck, chicken or pork)
- time and date put on display
- time and date removed from display
- premises, if you are keeping this record for more than one location, make sure it is clear which premises, stall or off-site location it relates to.

Please note the time meat can be displayed at room temperature is:

- Chinese-style roast ducks can be on display at room temperature for up to 22 hours.
- Chinese-style chickens can be on display at room temperature for up to 22 hours.
- Chinese-style barbeque or roast pork can be on display at room temperature for up to seven hours.
- Normal temperature control measures apply, that is, at or below 5 °C or above 60 °C for all other meats.

Put a copy of your record sheet near the display area.

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 9** template if you do not already have this information in existing records.

How to complete this record

Premises:				
Date	**Meat: duck/chicken/pork**	**Time put on display**	**Date taken from display**	**Time taken from display**
21/11/20XX	Duck	12.00pm	21/11	7.00pm
21/11/20XX	Chicken	12.00	22/11	10.00am
21/11/20XX	Pork	13.00	21/11	8.00pm

To access and use the **Record 9 - Chinese-style meats display time log** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 10 - Sous vide cooking method

To check

Cooking method

How often

Complete this record as you add or remove items or modify procedures for all food on your menu.

The minimum information required for this record is:

- the procedure used for each menu item cooked using the sous vide method
- cooking method details, including:
- food category (as per table 1 below)
- cooking temperature, food must not be cooked below 55 °C as temperatures below 55 °C will not kill potentially hazardous bacteria that may be present
- maximum thickness of food
- heating time to core temperature for category 1 foods
- cooking time (as per tables 2 and 3 below)
- cooling time to reach 5 °C or below
- if the food will be reheated.

To help you categorise temperature and time, see the **Tables 1, 2 and 3** on the followingpages.

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 10** template if you do not already have this information in existing records.

To access and use the **Record 10 - Sous vide cooking method** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Table 1: The two categories of food cooked using the sous vide method in this supplement

Based on the category definition. decide what category the high risk food you intend to cook belongs to. This will guide you on what method to use.

Category	1	2
Category definition	Foods other than whole muscle red meats or seafood that **must be cooked correctly to be safe to consume.**	Whole muscle red meats or seafood
	Foods that must be cooked correctly to be safe to consume include: • minced, diced or sliced meat, terrines or pates • deboned, stuffed, formed or rolled meat or other processes where bacteria may be in the centre of a formed meat piece • mechanically or needle-tenderised meat, or other similar processes, where potential & hazardous bacteria may have been moved or pushed into the interior of the meat by the tenderising process • offal, such as tripe, kidney, liver or brains from any animal • chicken, duck, quad or turkey meat. **Note:** It does not include foods that are safe to consume uncooked. Follow the safe food practices in your food safety program for foods such as diced vegetables, dairy foods and egg products.	An intact piece of red meat muscle from an animal. or an intact piece of seafood. For example, a T-bone or sirloin steak, kangaroo, wallaby or emu fillet, a leg of lamb, lamb shank, pork fillet or seafood, such as a scallop or fillet of fish.
What tables must I use to work out the cooking time and temperatures?	**Use Table 2** in this supplement to work out the heating time required to bring the food up to cooking temperature based on the maximum thickness of the food. If you follow a procedure for this menu item, make sure the thickness of the food is consistent. Once the required time has been met for heating up. start the cooking stage. **Use Table 3** in this supplement to determine the minimum cooling time. Check that the core of the food is held at the specified cooking temperature for the required time. This is important to ensure any potentially hazardous bacteria in the food are destroyed.	**Use Table 3** in this supplement to work out the minimum cooking time the food must be cooked for. This is important to ensure any potentially hazardous bacteria on the surface of the food are destroyed. For this category only, the food does not need to cook through to the core.

Category	1	2
Use tables	Table 2: Heating time for different thicknesses of food + Table 3: Cooking Temperature and Time = Total cooking time required	Table 3: Cooking temperature and time.

Table 2: Heating time for different thicknesses: Category 1 foods

Use this table for Category 1 foods to work out the heating time prior to starting to cook. The thickest part of the food must be used when referring to this table.

Thickness (cm)	Time (minutes)
0.5	5
1	19
2	50
3	90 (1hr 30min)
4	150 (2hr 30min)
5	210 (3hr 30min)
6	285 (4hr 45 min)

*not to scale

Table 3: Cooking temperature and time: Category 1 and 2 foods

Use this table to work out the cocking time for the food item (after the heating up time is completed from Table 2, if it is a Category 1 food).

Cook temperature °C	Minimum Time (minutes)	Notes
55	200 (3hr 20min)	Total heating and cooking time must not exceed 6 hours (360 minutes) when these cooking temperatures are used.
56	147 (2hr 27min)	
57	109 (1hr 49min)	
58	80 (1hr 20min)	
59	59 minutes	
60	44	
61	32	
62	24	
63	18	
64	13	
65	10	
66	7	
67	5	
68	4	
69	3	
70	2	
71	1 minute 30 seconds	
72	1 minute 05 seconds	
73	48 seconds	
74	36 seconds	
75	26 seconds	

Your records

Menu item	Food Category 1 or 2	Cooking temperature (55-75 °C)	Maximum thickness of food	Heating time to core temperature for Category 1 foods		Cooking time based on cooking temperature (Table 3)		Total time required	Cooling time to reach 5 °C or below*	Food will be reheated (Yes/No) Reheat food rapidly to at least 55 °C and do not exceed 4 hours reheating between 55-60 °C
Rolled chicken breast	1	64 °C	3 cm	1 hr 30 min	+	13 min	=	1 hr 30 min	N/A	No
Salmon fillet	2	60 °C	N/A	N/A (this is a category 2 food)	+	44 min	=	44 min	55 min in cool room 1	Yes, for up to 4 hours at 60 °C then serve immediately or throw in the bin.
Beef burger	1	55 °C	2 cm	50 min	+	3 hr 20 min	=	4 hr 10 min	45 min in ice bath	Yes, for up to 4 hours at 55 °C then serve immediately or throw in the bin.
Kangaroo fillet	2	56 °C	N/A	N/A (this is a category 2 food)	+	2 hr 27 min	=	2 hr 27 min	35 min in ice bath	Yes, for up to 4 hours at 56 °C then serve immediately or throw in the bin.

Your records

Menu item examples	Procedure (including finishing off the food – such as searing in a pan)
Rolled chicken breast Category 1	1. Slice uncooked rolled chicken breast portions 3 cm thick from frozen. 2. Package and vacuum-seal individually. 3. Defrost overnight in the fridge. 4. Check the water is at 64 °C. 5. Add a maximum 10 bags per water bath. 6. Cook in water bath at 64 °C for a minimum 1 hour and 43 minutes – remember to set a timer! 7. Hold hot in the water bath at 64 °C. 8. Discard any portions left in the water bath at the end of service.
Salmon fillet Category 2	1. Single serve chilled raw salmon pieces are individually packaged with 1 tablespoon of butter and sage. 2. Seal and make sure air is removed. 3. Check water is at 60 °C. 4. Cook in water bath for a minimum 44 minutes – remember to set a timer! 5. Cool in the cool room in a single layer on the top shelf for at least 55 minutes. 6. Label with today's date. 7. Reheat in water bath at 60 °C for up to 4 hours, no more than 5 bags per water bath. 8. Remove from package. 9. Pan sear prior to serving. 10. Discard any portions left in the water bath after 4 hours.
Beef burger Category 1	1. Package two burgers per pack, side by side, and measure each as 2 cm thick. 2. Seal and make sure air is removed. 3. Check water is at 55 °C. 4. Add a maximum of 10 bags per water bath. 5. Cook in water bath at 55 °C for 4 hours and 10 minutes – remember to set a timer! 6. Cool in an ice bath for at least 45 minutes, label with today's date and store in the fridge. 7. Reheat in water bath for at 55 °C for up to 4 hours, with no more than 10 bags per water bath. 8. Remove package. 9. Pan sear prior to serving. 10. Discard any portions left in the water bath after 4 hours
Kangaroo fillet Category 2	1. Package the fillet individually with marinade. 2. Seal and make sure air is removed. 3. Check water is at 56 °C. 4. Cook in water bath at 56 °C for a minimum of 2 hours and 27 minutes – remember to set a timer! 5. Label with today's date. 6. Cool in an ice bath for at least 35 minutes. 7. Reheat in water bath at 56 °C for up to 4 hours, with no more than 5 bags per water bath. 8. Remove from package. 9. Pan sear prior to serving. 10. Discard any portions left in the water bath after 4 hours.

Your records

Required records

Record 11 - Sous vide batch information

To check

Batch information

How often

Two items monthly

The minimum information required for this record is:

- date
- food item
- food thickness (category 1 as per table 1)
- time taken to heat up
- cook temperature and time (Category 1 food – measure the core temperature, Category 2 food – measure
- the water bath temperature)
- cooling – time taken to reach less than 5 °C – chill food rapidly
- corrective action - if any adjustments or actions are required, write down what these are. Make
- sure **Record 10: Sous vide cooking method** is up to date if you make changes to the cooking method

See the **Tables 1, 2 and 3** on the following pages.

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 11** template if you do not already have this information in existing records.

Your records

Table 1: The two categories of food cooked using the sous vide method in this supplement

Based on the category definition. decide what category the high risk food you intend to cook belongs to. This will guide you on what method to use.

Category	1	2
Category definition	Foods other than whole muscle red meats or seafood that **must be cooked correctly to be safe to consume.**	Whole muscle red meats or seafood
	Foods that must be cooked correctly to be safe to consume include: • minced, diced or sliced meat, terrines or pates • deboned, stuffed, formed or rolled meat or other processes where bacteria may be in the centre of a formed meat piece • mechanically or needle-tenderised meat, or other similar processes, where potential & hazardous bacteria may have been moved or pushed into the interior of the meat by the tenderising process • offal, such as tripe, kidney, liver or brains from any animal • chicken, duck, quad or turkey meat. **Note:** It does not include foods that are safe to consume uncooked. Follow the safe food practices in your food safety program for foods such as diced vegetables, dairy foods and egg products.	An intact piece of red meat muscle from an animal. or an intact piece of seafood. For example, a T-bone or sirloin steak, kangaroo, wallaby or emu fillet, a leg of lamb, lamb shank, pork fillet or seafood, such as a scallop or fillet of fish.
What tables must I use to work out the cooking time and temperatures?	**Use Table 2** in this supplement to work out the heating time required to bring the food up to cooking temperature based on the maximum thickness of the food. If you follow a procedure for this menu item, make sure the thickness of the food is consistent. Once the required time has been met for heating up. start the cooking stage. **Use Table 3** in this supplement to determine the minimum cooling time. Check that the core of the food is held at the specified cooking temperature for the required time. This is important to ensure any potentially hazardous bacteria in the food are destroyed.	**Use Table 3** in this supplement to work out the minimum cooking time the food must be cooked for. This is important to ensure any potentially hazardous bacteria on the surface of the food are destroyed. For this category only, the food does not need to cook through to the core.

Category	1	2
Use tables	Table 2: Heating time for different thicknesses of food + Table 3: Cooking Temperature and Time = Total cooking time required	Table 3: Cooking temperature and time.

Table 2: Heating time for different thicknesses: Category 1 foods

Use this table for Category 1 foods to work out the heating time prior to starting to cook. The thickest part of the food must be used when referring to this table.

Thickness (cm)	Time (minutes)
0.5	5
1	19
2	50
3	90 (1hr 30min)
4	150 (2hr 30min)
5	210 (3hr 30min)
6	285 (4hr 45 min)

*not to scale

Table 3: Cooking temperature and time: Category 1 and 2 foods

Use this table to work out the cocking time for the food item (after the heating up time is completed from Table 2, if it is a Category 1 food).

Cook temperature °C	Minimum Time (minutes)	Notes
55	200 (3hr 20min)	Total heating and cooking time must not exceed 6 hours (360 minutes) when these cooking temperatures are used.
56	147 (2hr 27min)	
57	109 (1hr 49min)	
58	80 (1hr 20min)	
59	59 minutes	
60	44	
61	32	
62	24	
63	18	
64	13	
65	10	
66	7	
67	5	
68	4	
69	3	
70	2	
71	1 minute 30 seconds	
72	1 minute 05 seconds	
73	48 seconds	
74	36 seconds	

Your records

How to complete this record

Date	Food item	Food thickness (Category 1 food only)	Time taken to heat up	Cook temperature and time (Category 1 food - measure the core temperature, Category 2 food — measure the water bath temperature)	Cooling - time taken to reach less than 5 °C*. Chill food	If any adjustments or actions are required, write down what these are. Make sure Record 1 is up to date if you make changes to the cooking method
21/10/20XX	Rolled chicken breast	3 cm	1hr 30min	Category: 1 Temp: 64 °C Cook time: 13min Time total: 1hr 43min	No cooling – served after cooking.	None
24/10/20XX	Beef burger	2 cm	50min	Category: 1 Temp: 55 °C Cook time: 3hr 20 min Time total: 4hr 10 min	45min in ice bath reaches 3°C	None
05/12/20XX	Salmon fillet	N/A	N/A	Category: 2 Temp: 60 °C Cook time: 44 min Time total: 44 min	55min in cool room to reach 5°C	Yes, 10 minutes added to cooling time when using cool room.
30/04/20XX	Kangaroo fillet	N/A	N/A	Category: 2 Temp: 56 ° Cook time: 2hr 27 min Time total: 2hr 27 min	35min in ice bath to reach 4 °C	None

*All food must be cooled as a minimum from 60°C (or less) to 21°C within 2 hours, and from 21°C to 5°C within a further four hours; a total of 6 hours.

To access and use the **Record 11 - Sous vide batch information** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 12 - My pH checks and meter accuracy

To check

pH Measurement

How often

Validation initially and ongoing monthly checks

The minimum information required for this record is:

- date
- batch tested
- initial pH drop
- time taken to achieve this pH drop, see below for time required for your product
- pH for the finished product
- any corrective action.

Adequate pH testing requires you to:

- Validate your process (**Record 12A**), measure the pH of your food in five concurrent batches (for each flavour variant). The pH must be under 4.6 after initial acidification and for the finished product.
- Ensure ongoing food safety with monthly checks (**Record 12B**). Repeat your pH testing at least once a month (for each flavour variant).

You can choose the way you keep this information, such as in the record below, in your daily business diary, or somewhere that the information can be retrieved quickly, if requested.

How to complete this record

How to measure the pH of food

Remove a sample: Always remove a small sample from your product and test this sample. Testing your main batch can cause hazards such as: physical contamination from broken glass from a damaged electrode, bacterial contamination from using an unclean electrode or paper, cross contamination from another product or chemical contamination from cleaning chemical residue present on the electrode.

Prepare your sample: Samples should be tested at a constant temperature, preferably room temperature. Rinse and dry the electrode between products. If your product is a mixture of solid and liquid foods (such as pickled vegetables), you must measure both components together by blending all components into a puree using proportional amounts of the components.

pH meter care:

- rinse the electrode between each use using warm tap water
- only use soft facial tissues (they must not have added oils like lavender or aloe vera) to wipe the electrode
- the electrode can get food build-up on it from testing which will make it inaccurate - follow the
- manufacturer's instructions to make sure it is cleaned properly
- when not in use, follow the manufacturer's instructions for correct storage. It may need to be stored in distilled water.

Your records

Record 12A – measuring pH to validate your acidification process

Use this record to validate your process. Validation must be repeated if your process or formulation changes, and for new flavours.

Product name (flavour):	**Kimchi**									
pH drop timeframe?	**24 hrs**									
			pH meter calibration – daily		**pH checks after pH drop**				**pH of finished product**	
Test #	**Batch ID**	**Date and time fermentation initiated**	**Reading for pH 4.0 buffer**	**Reading for pH 7.0 buffer**	**Date and time of pH check**	**Check pH**	**Time between initiation and 1 pH check?**	**Corrective action (if pH is above 4.6)**	**Final check pH**	**Corrective action (if pH is above 4.6)**
1	15/12/24	9/05/24 3pm	4.01	7.00	10/05/24 3pm	4.8	24 hrs	N/A	3.8	N/A
2	21/01/24	10/06/23 10am	3.69	4.61	11/05/24 9.55am	4.7	24 hrs	Add 30ml vinegar and retest	4.7	Fermentation unsuccessful. Discarded.
3										
4										
Have you achieved compliant results for five concurrent batches of your product? Yes, or no? If no, you will need to repeat the validation process.										

Record 12B – monthly ongoing pH measurement to confirm your process is still working

Repeat your pH testing at least once a month, testing is to be undertaken for each flavour variant.

Product name/flavour		**Kimchi**							
		pH meter calibration - daily		**pH checks after pH drop**				**pH of finished product**	
Batch ID	**Date and time fermentation initiated**	**Reading for pH 4.0 buffer**	**Reading for pH 7.0 buffer**	**Date and time of pH check**	**pH of sample**	**Time between initiation and pH check?**	**Corrective action (if pH is above 4.6)**	**pH of sample**	**Corrective action (if pH is above 4.6)**
11032	9/11/24	4.00	4.01	10/11/24	4.6	24 hrs	N/A	3.8	N/A
11083	9/12/24	3.59	7.00	10/12/24	4.5	24 hrs	N/A	3.8	N/A
11084	9/01/25	4.1	7.01	10/01/25	4.5	24 hrs	N/A	4.7	N/A

To access and use the **Record 12 – My pH checks and meter accuracy** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 13 - Alcohol strength in my brewed soft drinks by batch

To check

Alcohol strength in brewed soft drinks

How often

Per batch

The minimum information required for this record is:

- product name/flavour
- date
- batch ID
- alcohol strength (% ABV)
- any corrective action taken.

Measure one sample from each finished batch produced for alcohol* strength. A brewed soft drink may contain no more than 1.15% alcohol by volume. **Please note:** If you are selling product within the state of Victoria, and your product exceeds **0.5% alcohol by volume (ABV)**, it is considered a liquor and falls under the Victorian *Liquor Control Reform Act 1998*, and you will be required to hold a liquor license. For more information contact the Victorian Liquor Commission at <https://www.vic.gov.au/liquor-regulation-victoria>.

Refer to **Record 15: How I measure the alcohol strength in my brewed soft drinks** method for measuring alcohol strength in brewed soft drinks to ensure you are using a permissible method to measure your product. The instruments and processes used to measure the alcoholic strength must be able to produce a result with a tolerance of +/- 0.3% points of the actual alcoholic strength. **Records must be completed for each flavour variant you produce.**

*The term 'alcohol' is a reference to ethyl alcohol or ethanol.

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 13** template if you do not already have this information in existing records.

Your records

How to complete this record

Record 13 – Alcohol strength in my brewed soft drinks by batch

Product name/flavour:			Apple		
My testing method and variance			Ebulliometer		
Date	**Batch ID**	**Result: Alcohol strength (°/0 ABV)**	**Is your alcohol strength (mark the correct column):**		**Corrective action, if above 1.15%**
			Less than 1.15% ABV	**Greater than 1.15%**	
9/05/24	12252	0.42			N/A
12/05/24	12257	1.16		X	Discard, review process.
15/05/24	12260	*0.25*	X		N/A

To access and use the **Record 13 – Alcohol strength I my brewed soft drinks by batch** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 14 - Alcohol strength in my brewed soft drinks for the duration of shelf life

To check

Alcohol strength at end of shelf life

How often

Annually

The minimum information required for this record is:

- product name/flavour
- the year the results relate to
- shelf life
- batch ID
- date mark
- alcohol strength (% ABV) of three samples from three concurrent batches (for each flavour you produce),
- at the end of their stated shelf life for alcohol strength. You must provide certificates of analysis stating how much alcohol*, including the variance, is present in your product at the end of its shelf life.
- Certificates must be from a laboratory accredited with the National Association of Testing Authorities tolerance of test.

The instruments and processes used to measure the alcoholic strength must be able to produce a result with a tolerance of up to +/- 0.3% points of the actual alcoholic strength. A brewed soft drink may contain no more than 1.15% alcohol by volume for the duration of the shelf life. **Please note:** If you are distributing product within the state of Victoria, and your product exceeds **0.5% alcohol by volume (ABV)**, it is considered a liquor and falls under the Victorian *Liquor Control Reform Act 1998*, and you will be required to hold a liquor license.

For more information contact Victorian Liquor Commission at <https://www.vic.gov.au/liquor-regulation-victoria>.

*The term 'alcohol' is a reference to ethyl alcohol or ethanol.

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 14** template if you do not already have this information in existing records.

How to complete this record

Your records

Record 14 - Alcohol strength in my brewed soft drinks for the duration of shelf life

Product name/flavour:			Apple Kombucha			**Which year are these results for?**	2025
Shelf life (in days):			90 Days				
Test#	**Date tested**	**Batch ID**	**Date marked on packaging (end of shelf life)**	**Result: Alcohol strength determined by a NATA accredited laboratory Mr**		**Tolerance of test (%)**	**Is the alcohol strength compliant at the end of shelf life? Yes, or no?**
1	05/03/25	2235	BB 05/03/15	**Sample 1**	0.38	0.3	Yes
				Sample2	0.39	0.3	Yes
				Sample 3	0.38	0.3	Yes
2	13/03/25	2236	BB 13/03/25	**Sample 1**	0.39	0.3	Yes
				Sample 2	0.40	0.3	Yes
				Sample 3	0.39	0.3	Yes
3	25/03/25	2237	BB 25/03/25	**Sample 1**	1.16	0.3	No
				Sample2	1.17	0.3	No
				Sample 3	1.16	0.3	No

Have you achieved compliant results for three samples from three concurrent batches of your product (that is, nine tests in total)?

Yes, or no? If no, you will need to repeat the validation process to determine the shelf life of your product.

* Your certificates of analysis must be attached to this record.

To access and use the **Record 14 - Alcohol strength in my brewed soft drinks for the duration of shelf life** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 15 - How I measure the alcohol strength in my brewed soft drink

To check

Method of measurement for brewed soft drinks

How often

Once

The minimum information required to for this record is:

- Type of method used. Permissible methods to test the alcoholic* strength of your products, corrected to 20 °C are:
  - gas chromatography
  - near infra-red spectrometry
  - distillation followed by the gravimetric measurement of the distillate or by measurement in a density meter.
- For any other method that consistently produces a similar result, a documented testing process where you have compared your results to those from a laboratory accredited with the National Association of Testing Authorities. If you produce less than 100,000 litres of brewed soft drink per year you may use a ebulliometer to measure alcohol strength, use **Record 16** to validate your process. This record must be repeated annually.

The instruments and processes used to measure the alcoholic strength must be able to produce a result with a tolerance of +/- 0.3% points of the actual alcoholic strength.

*The term 'alcohol' is a reference to ethyl alcohol or ethanol.

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 15** template if you do not already have this information in existing records.

To access and use the **Record 15 - How I measure the alcohol strength in my brewed soft drink** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 16 - My ebulliometer accuracy checks for measuring alcohol strength in brewed soft drink

To check

Ebulliometer accuracy

How often

Annually

The minimum information required for this record is:

- Practice - any calculations and formulas you use for calculating the alcohol strength of your product
  using a hydrometer and formula.
- Provide certificates of analysis (COA) stating the alcohol strength of your products, including the variance, in three samples from three concurrent batches of your product (that is, nine tests in total). Certificates must be from a National Association of Testing Authorities accredited laboratory.
- Compare your ebulliometer results to lab COAs of the same batch, to validate your testing procedure.

If you produce less than 100,000 litres of brewed soft drink in a calendar year, it is permissible to use an ebulliometer and a formula to measure the alcoholic strength of your brewed soft drink, provided it is supported by the testing process set out below.

You can choose the way you keep this information; in your daily business diary, or somewhere that the information can be retrieved quickly, if requested. Use **Record 16** template if you do not already have this information in existing records.

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To access and use the **Record 16 - My ebulliometer accuracy checks for measuring alcohol strength in brewed soft drinks** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.

Your records

Required records

Record 17 - Manufacturing internal review

To check

Internal review checklist

How often

Complete every three months.

This internal review is a tool to help you focus on areas that need attention and to ensure staff are following the food safety program.

How to complete this record

- The questions must be answered yes or no.
- Describe what needs to be done/fixed in the observation column.
- Corrective action: what action was taken to overcome the problem.
- Signed and dated: when the corrective action was completed.

The food safety supervisor should use this checklist at least every three months.

Some elements of these processes will not apply to your business. Mark N/A if the question is not applicable to your business.

To access and use the **Record 17 - Manufacturing internal review** template, go to: <https://www.health.vic.gov.au/food-safety/foodsmart> and download the 'FoodSmart records' zip file.