Ministry for Primary Industries
Manatū Ahu Matua

Name of business:

Food Control Plan

Food Service and Food Retail

Consultation

Specialist Retail – Fish Safe

For retail businesses that process and handle fish and fish products.

Add to the food service and retail *management and basics* section.

New Zealand Government

Growing and Protecting New Zealand

Fish Safe

Contents

Fish Safe

Calculating shelf life

Goal

To provide information on the period of time that food is safe to eat and other necessary information for customers.

Act requirements:

- Food must be safe and suitable.

Why?

- Food for sale needs to meet the requirements of the Food Act 2014 and the Australia New Zealand Food Standards Code (the Code).
- When food is been taken out of its original packaging its shelf-life may change.
- Re-packaged food will need to be labelled with a date indicating the shelf-life.
- Food that is sold with inaccurate shelf-life information could make customers ill.

How this is done

The Code requires that:

- any packaged food with a shelf-life of less than two years be labelled with a date – Standard 1.2.5;
- food is safe up to, and including, the date marked;
- specific storage instructions are provided where necessary to ensure that the food will keep for the period indicated on the date mark – Standard 1.2.6;
- storage conditions must be achievable in distribution and retail;
- a seller must store food according to stated storage instructions.

Consideration also needs to be given to providing directions for use and storage after packaging has been opened where these are needed to keep food safe.

It is important that a business accurately calculates the shelf life of any product it makes that is not likely to be eaten within 5 days.

When original packaging is opened, the shelf-life calculated by the manufacturer will change. It is important to know how long the food will now keep for. The new shelf-life should take account of:

- the time needed to sell the food;
- a reasonable amount of time for a customer to use it.

Calculating shelf life when making products

- The shelf life of chilled, ready-to-eat (RTE) manufactured foods must be calculated to provide an accurate "Use-by" date;
- The shelf life of other foods must be calculated to provide an accurate "Use-by" or "Best-before" date – see *Food labelling.*
- Foods made by the business must meet the microbiological limits identified in the Code Standard 1.6.1 – see *Limits for harmful organisms in meat products.*

A *Date Marking User Guide to Standard 1.2.5 – Date Marking of Food For Sale* can be used to decide whether a "best-before" or a "use-by" date is appropriate for a food: **http://www.foodstandards.govt.nz/code/userguide/Documents/Guide%20to%20Standard%201.2.5%20-%20Date%20Marking%20of%20Food.pdf**

How this is done

Calculating shelf life when using products made elsewhere

The shelf life of a readily perishable food taken from its original wrapping must be calculated so that it can't be sold or used beyond its "use-by" date. This date is calculated from information provided with the food by the manufacturer or by asking the manufacturer:

- how the food needs to be handled once out of its original packaging; and
- how long the food will be safe to use.

A system is used that ensures the food can be sold within these limits while giving customers time to safely use it. Information about the system is kept at: (identify where this is)

_____.

The person responsible for operating the system is: (identify who this is)

_____.

An example of calculating the shelf life of an opened manufactured product is provided in *Guidance on calculating shelf-life*.

What if there is a problem?

Don't sell food until you can accurately provide information about its shelf-life.

If you do not know if a food is within its "Use-by" date, throw it away.

It is important to understand the range of matters that can affect the shelf life of the foods you make, such as:

- changes that may occur during processing and storage
- changing the storage conditions or repackaging
- factors in or around food that affect shelf-life
- the likely causes of deterioration and spoilage of the types of foods you make

Information about these issues can be found at: **http://www.foodsafety.govt.nz/elibrary/industry/determine-shelf-life-of-food/how-to-determine-the-shelf-life-of-food-revision.pdf**

Fish Safe

Food additives in fish and fish products

Goal

To ensure that only permitted food additives are used to make meat products.

Act requirements:

- Food must be safe and suitable.

Why?

- Herbs, spices and other ingredients may be contaminated with harmful microorganisms.
- Using a validated and tried and tested recipe helps make a safe product.
- The Australia New Zealand Food Standards Code (the Code) prescribes certain food additives and their amounts that can be added to meat, poultry, game and other products.
- If a non-permitted additive is in a food, or the amount of a permitted food additive exceeds the limit prescribed in the Code, safe limits may be exceeded.

How this is done

All ingredients must come from reputable suppliers and are safe for use when making products – see *Purchasing and receiving food*.

All ingredients and food additives used are permitted for use by, and comply with, the Code – see also *Food composition – general*.

Check the Code for the requirements for the products that you make or sell at: **http://www.foodstandards.govt.nz/code/Pages/Food-Standards-Code-from-1-March-2016.aspx**

What if there is a problem?

If a non-permitted food additive is in food, throw the food away.

If too much of an additive is present in the finished product, the product must be thrown away unless it may be reworked using a process that is approved by a Food Safety Officer.

Review process to identify how this happened and work out how to prevent it happening again.

Write it down

Keep a record of your calculations of food additives to confirm that your products meet requirements of the Code – either in the Diary or with your recipes.

You must write down (e.g. in the Diary) what you did to deal with a problem, what you did with the food and what action you took to prevent this happening again.

Do I need to have a recipe written down?

Writing down and following a tried and tested recipe is a way to make a consistently safe product that meets compositional and other requirements each time it is made. The recipe can also be used to check what should have been added to each batch against the batch records showing what was actually added.

Following a recipe and keeping a record of what went into each batch can also help you to show how you consistently meet requirements in the Act and the Code.

If you change anything in a tried and tested recipe you may affect safety and composition of the end product. You will need to check– validate – that any change to the recipe, ingredients or process continues to make a safe and suitable food.

Fish Safe

Limits for harmful microbes in fish and fish products

Goal

To ensure that fish and fish products meet microbiological and compositional requirements.

Act requirements:

- Food must be safe and suitable.

Why?

- The Australia and New Zealand Food Standards Code (the Code) sets levels for the maximum permissible number of harmful microbes that may be present in meat products.
- Fish products where levels aren't set in the Code may still contain harmful organisms if they aren't adequately processed and handled.

How this is done

Microbiological requirements of fish and fish products

Levels of harmful microbes in fish and fish products

Herbs, spices or premixes used in products are sourced from suppliers who can provide information to show that they do not contain harmful organisms in amounts that may affect the safety of the food.

A check is made that fish and fish products sold comply with microbiological requirements of the Code.

The Code Standard 1.6.1 sets maximum permissible levels of harmful organisms that may be present in certain fish products.

Other fish products that are not included in Standard 1.6.1 may also support the growth of harmful organisms. Guidance on microbiological levels for harmful organisms that may be found in products such as raw fish and shellfish is at: **http://www.foodsafety.govt.nz/elibrary/industry/Microbiological_Reference-Guide_Assess.pdf**

Further information about what a business needs to do to keep Listeria monocytogenes out of RTE food is in the Listeria procedure and in other procedures throughout the plan.

Check the Code for the requirements for the products that you make or sell at: **http://www.foodstandards.govt.nz/code/Pages/Food-Standards-Code-from-1-March-2016.aspx**

What if there is a problem?

A product that doesn't meet microbiological limits must be thrown away unless it may be reworked using a process that is approved by a Food Safety Officer.

Review practices to identify how this happened and take action to prevent it happening again.

Write it down

You must write down (e.g. in the Diary) what you did to deal with a problem, what you did with the food and what action you took to prevent this happening again.

Keep a record to show how your products meet microbiological requirements of the Code either (e.g. in the Diary) or with your recipes.

Fish Safe

Composition of fish products

Goal

To ensure that fish and fish products meet compositional requirements.

Act requirements:

- Food must be safe and suitable.

Why?

- The Australia New Zealand Food Standards Code (the Code) applies definitions, composition and labelling requirements to fish and fish products.

How this is done

Composition of fish and fish products

Compositional requirements for fish and fish products

Carbon monoxide must not be used in the processing of fish if its use results in a change to, or fixes, the colour of the flesh of the fish.

A check must be made that fish and fish products sold comply with compositional requirements of the Code – see also *Food composition – general*.

The Code Standard 2.2.3 includes definitions, compositional and specific labelling requirements for fish and fish products. Check the Code for the requirements for the products that you make or sell at: **http://www.foodstandards.govt.nz/code/Pages/Food-Standards-Code-from-1-March-2016**.

Examples of composition requirements for fish and fish products are in the *Guidance Composition*.

What if there is a problem?

Products that don't meet compositional requirements but which are safe to eat may be reworked where the process is approved by a Food Safety Officer.

Review practices to identify how this happened and work out how to prevent it happening again.

Write it down

Keep a record of your calculations to confirm that your products meet compositional requirements of the Code – either in the Diary or with your recipes.

Write down (e.g. in the Diary) what you did to deal with a problem, what you did with the food and what action you took to prevent this happening again.

Fish Safe

Making and using ice

Goal

To ensure that ice is made, used and sold hygienically.

Act requirements:

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

Why?

- Ice can become contaminated from hands, contact surfaces, chemicals, pests and other foreign objects.
- A fresh water supply to an ice-making machine that is not of drinkable quality may contain harmful microbes that could make customers ill.
- Seawater used to make ice must be free from harmful organisms that could contaminate seafood.

How this is done

Surfaces and equipment used for preparing ice must be in sound condition and clean before use. Surfaces in contact with ice must sanitised before use – see *Cleaning and Equipment, packaging and other items in contact with food*.

Good hand hygiene and personal hygiene practices must be followed – see *Hand hygiene and Personal hygiene*.

Ice making equipment

Equipment making ice must use a clean water supply to make cubes or blocks of ice. The ice making equipment must be located or sited to:

- prevent ice from becoming contaminated;
- enable easy cleaning of equipment and surrounding area;
- prevent harbourage for pests.

Water

Water for making ice must be clean and meet requirements for water – see *Water*.

Seawater used for making ice must not contain any E. coli or other faecal coliforms.

Maintenance and use

During use:

- all parts of the ice making equipment that come into contact with water or ice must be regularly cleaned and sanitised – moulds must not be allowed to grow particularly in areas where condensation occurs (which can often be hard-to-reach places to clean);
- equipment location must be kept clean and hygienic;
- shovels, axes, scoops, containers and other equipment that comes into contact with ice must be regularly cleaned and sanitised;
- equipment/utensils used with ice must be stored hygienically when not being used in ways that prevent contamination;
- ice must be protected from contamination and handled and stored hygienically;
- water used to make ice must be maintained so that it is clean.

Ice from suppliers

- Delivered blocks/containers of ice must be checked for signs of contamination.
- Bagged ice must be delivered in clean, intact bags.
- Ice storage containers (including freezers) must be clean.

How this is done

Using ice

- Ice that has been in contact with non-ready-to-eat food must not be sold, or used with other foods.

What if there is a problem?

Visibly contaminated ice received from suppliers is rejected or only used where it will not come into contact with food.

Ice spilled from broken/split bags/containers is not sold/used.

If cleaning or handling procedures aren't followed find out why and take action to stop it happening again.

Retrain staff if necessary.

Write it down

You must write down in the Cleaning schedule the surfaces and equipment used, when they need to be cleaned (and sanitised); how this is done, and by whom.

You must write down (e.g. in the Diary) any problems that occurred and what you did to prevent them from happening again.

Fish Safe

Live shellfish

Goal

To ensure that live shellfish, e.g. mussels, are handled in a safe and hygienic way.

Act requirements:

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

Why?

- Shellfish that do not come from licensed farms can contain harmful microbes.
- Harmful microbes can contaminate live shellfish through unclean people, equipment and utensils after harvesting.
- Harmful microbes can grow on shellfish kept too warm.
- Harmful microbes from dead or damaged shellfish can contaminate live ones.
- Chemicals used on food surfaces, and transported or stored with live shellfish can contaminate them.

How this is done

Live shellfish must be received with information that includes the marine farm number, the harvester and date of harvest.

If harvested in summer (December to March) they should be chilled within 20 hours of harvesting; during other months chilling should be within 24 hours of harvesting.

Shellfish must be stored at a temperature of between 5ºC and 10ºC and kept moist.

Temperatures below 5ºC can kill live shellfish.

Contact with fresh water (including ice) and damaging their shells can also kill shellfish.

- equipment used for handling live shellfish must be checked that it is clean before use. Display units must be cleaned and maintained according to manufacturers instructions – see *Cleaning and Maintenance*;
- good hand hygiene and personal hygiene practices must be followed when handling live shellfish – see *Hand hygiene and Personal hygiene*.

Receiving live shellfish

Live shellfish must be received that (identify which apply):

- ☐ were chilled no later than 20 hours after harvesting in summer; or
- ☐ were chilled no later than 24 hours after harvesting in winter, and
- ☐ chilled to a temperature of 10ºC;
- ☐ are received with the harvesting declaration.

Live shellfish must be checked for mud, stones and other foreign matter on arrival and action taken to keep foreign matter out of food.

Storage

Live shellfish must be:

- placed in a chiller and stored at no more than 10ºC;
- protected from drying-out (e.g. kept away from high air-flows);
- stored so that they do not come into contact with fresh water/ice;
- stored so that fluids/liquids can drain away;
- handled carefully to prevent damage to shells.

How this is done

Display and sale

Live shellfish display units must:

- be operated in accordance with manufacturers' instructions;
- maintain a salinity of 3.3%;
- have water changed regularly to remove material flushed from shellfish and maintain water quality;

Live shellfish display units must be checked regularly:

- that temperature is no more than 10ºC;
- that any dead or broken shellfish removed;
- are only cleaned using chemicals approved by the unit manufacturer.

What if there is a problem?

Live shellfish must not be accepted:

- if harvesting information is not provided;
- if there is gross contamination;
- if shellfish have been contaminated during transport;
- if there is a high proportion of dead or damaged shellfish.

If shellfish are damaged during handling, review staff training and supervise handling practices.

Dead and damaged shellfish must not be sold.

Write it down

You must write down in the Cleaning schedule the surfaces and equipment used, when they need to be cleaned (and sanitised); how this is done, and by whom.

You must write down (e.g. in the Diary):

- what you did if you found a high proportion of dead shellfish in a batch
- temperature checks made of stored and displayed live shellfish
- what was done if storage or display temperatures are too warm.

File the harvest information provided with each delivery so that it is accessible in the event of a traceability or recall issue.

Shellfish – dead or alive?

Uncooked shellfish with slightly opened shells that close when tapped or knocked are alive.

Uncooked, wide-open shells that do not close when tapped are dead. The flesh may also be dry and smell 'off.' These must be thrown away.

Calculating salinity

100% salinity is defined as 1 gram of salt per millilitre of water (one thousand parts per thousand)

A 3.3% solution would be 3.3 grams dissolved in 100 mL water

Fish Safe

Defrosting frozen food

Goal

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

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

To ensure that previously frozen food is not refrozen.

Act requirements:

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

Why?

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

How this is done

Frozen seafood must be defrosted completely (not still frozen in the centre) before it is used as an ingredient.

Frozen products that can be defrosted and sold in a thawed state must be thawed following manufacturer's instructions

Defrosting food

Frozen readily perishable food being defrosted is (identify what you do):

☐ thawed following manufacturer's instructions,

☐ kept below 7°C during thawing,

☐ thawed in a way that has been demonstrated as minimising the growth of harmful microbes. This is done by: (state process) _____.

Thawing foods must be protected against contamination.

Thawed food

Once thawed, food must be either:

- used as soon as possible; or
- stored chilled until ready to use within its date code; and
- stored so that drip cannot contaminate other foods or surfaces – for example:
  - in a dish or container to contain drip;
  - away from other foods;
  - below ready-to-eat food.

A check must be made that the centre of the food has defrosted before using.

Thawed seafood must not be refrozen.

Customers must be informed of any storage or use conditions for keeping thawed seafood safe.

What if there is a problem?

Ready-to-eat food that has not been thawed according to manufacturer's instructions, or has exceeded a temperature of 7ºC during thawing must be thrown away.

Other readily perishable food which has exceeded a temperature of 7ºC during thawing for no more than 4 hours but which will be processed to make it safe must be chilled to below 5ºC until use or used straight away.

If food has not fully thawed, continue to defrost it until no ice crystals are left. Check again before either using or placing on display.

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

Review training of staff.

Write it down

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

It is best to thaw food in a chiller. Plan ahead to allow enough time and space to defrost food – this helps ensure that temperature throughout the product remains uniform.

Regularly check the chiller temperature to make sure that the food thaws evenly.

Ambient or room temperature thawing is not recommended for readily perishable foods as surfaces will thaw and become warm while the centre remains frozen.

Thawing tips

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

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

Fish Safe

Preparing raw seafood

Goal

To prevent cross-contamination between fish and other foods.

To hygienically prepare food and prevent microbes that may be present in food from multiplying to harmful numbers.

Act requirements:

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

Why?

- Harmful microbes that can cause foodborne illnesses will grow at temperatures between 5ºC to 60ºC (the temperature danger zone).
- Harmful microbes can contaminate food through unclean people, other foods, equipment and utensils.
- Food contaminated by chemicals can cause illness.
- Objects can fall into uncovered food affecting its suitability and/or safety.
- The Australia New Zealand Food Standards Code (the Code) places requirements on the composition of meat products.

How this is done

Situations where cross-contamination could occur between raw seafood and ready-to-eat (RTE) foods must be identified at the business – see *Preventing cross-contamination, Food Allergens*.

Where possible, surfaces, equipment and places used for preparing raw foods are different to those used for ready-to-eat food – see R*eadily perishable foods, Chilled and frozen food storage*.

Surfaces and equipment used for preparing food must be in sound condition and clean before use. Surfaces in contact with ready-to-eat foods must be sanitised before use – see *Cleaning and Equipment, packaging and other items in contact with food*.

Good hand hygiene and personal hygiene practices must be followed – see *Hand hygiene and Personal hygiene*.

All fish comes from a reputable source (e.g. a fish harvester or receiver operating in accordance with the Animal Products Act 1999) – see *Purchasing and receiving goods*.

Chilled seafood

Raw seafood must be prepared and/or packaged (identify which apply):

- ☐ in a dedicated area that is physically separate from cooked or RTE food;
- ☐ in the same area, but separate from the area used for cooked or RTE food;
- ☐ in an area shared with cooked or RTE food but processing of raw seafood takes place at different times. Thorough cleaning and sanitising must be carried out before RTE food is handled (raw food preparation should be after cooked or RTE food);
- ☐ using dedicated utensils (e.g. knives) for raw foods and cooked and ready-to-eat foods;
- ☐ using shared utensils but with thorough cleaning and sanitising in between.

Frozen seafood

- Frozen seafood must be kept frozen solid unless:
  - It is to be sold thawed, or
  - Is being thawed for processing (e.g. as an ingredient in a seafood pie);
- Thawed seafood must not be refrozen.

See *Chilled and frozen food and Defrosting frozen food*.

How this is done

Preparing seafood

- Seafood must be checked before preparation for signs of deterioration or spoilage including:
  - discolouration/appearance;
  - odour;
  - texture;
  - gases formed by spoilage bacteria in packaging ('blown' bags).
- Any visible contamination must be removed.
- Fish, especially scombroid fish, must have been rapidly chilled after catching and have been kept chilled until processed or cooked.
- Seafood must be protected from contamination and chilled when not being prepared.
- Gut and gut contents must not come into contact with edible flesh.
- Processing waste intended for use as bait – e.g. fish heads – must be put in containers and stored so that it cannot contaminate food for sale;
- Clean water must be used when rinsing seafood.
- Seafood must be handled hygienically.
- packaging must completely cover the food and prevents contents from leaking.

What if there is a problem?

If seafood shows signs of spoilage (discolour, odour, smell, slime) it must be removed and disposed of – see also Live shellfish.

If processing and handling procedures aren't followed find out why and take action to stop it happening again.

Retrain staff if necessary.

Write it down

You must write down in the Cleaning schedule the surfaces and equipment used, when they need to be cleaned (and sanitised); how this is done, and by whom.

You must write down (e.g. in the Diary):

- the daily temperature checks for seafood storage and displays and action taken if temperatures are too warm.
- any problems that occurred and what you did to resolve them and prevent them from happening again.

Histamine poisoning

Poisoning occurs when fish, particularly scombroid fish such as Kahawai, tuna and mackerel, are not handled or chilled appropriately and bacteria convert amino acids into biogenic amines. When eaten, these cause allergic symptoms such as rashes and skin inflammation. Heating does not destroy the amines.

Scombroid fish can have a 14 day safe shelf life at 0°C if chilled quickly (meaning reducing the internal temperature to 10°C or less in 6 hours), but this reduces to only 7 days at 4.4°C (these times include time on the boat). The fish should not be exposed to temperatures >4.4°C for more than 4 hours after the initial chilling. Vacuum packaging is not an effective means of retarding the production of amines.

Parasites in fish

Nematodes (a type of round worm from the family Anisakidae) occur naturally in marine fish. They only become a concern for consumers in raw or lightly preserved fish such as sashimi, sushi, ceviche, and gravlax. These parasites can be:

- individually removed from raw fish without making it unsafe;
- killed by deep-freezing fish for at least a week;
- killed by thorough cooking.

Fish Safe

Batters, marinades and coatings

Goal

To make and use batters, marinades and coatings in ways that prevent cross-contamination and the growth of harmful microbes.

To ensure that only permitted food additives are used in marinades and coatings.

Act requirements:

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

Why?

- Batters, marinades and coatings can contain allergens that can be passed to meat and other food.
- Raw foods dipped into marinades and coatings can leave harmful microbes behind.
- The Food Standards Code Standard 1.3.1 only permits certain food additives to be added to meat, poultry, game and fish products.
- If more of a food additive is used than is permitted safe limits may be exceeded.

How this is done

Ingredients must be suitable for any products made – see *Purchasing and receiving food*.

Surfaces and equipment used for preparing food must be in sound condition and clean before use. Surfaces in contact with ready-to-eat foods must be sanitised before use – see *Cleaning and Equipment, packaging and other itemsin contact with food*.

Potential for cross-contamination between batters, marinades and coatings and other foods must be identified – see also *Food allergens*.

Recipes must accurately calculate any prescribed food additives in meat products to meet the Code requirements – see *Additives in meat products, Food Composition – general and Food Composition of meat products, Food allergens, Food labelling*.

Good hand hygiene and personal hygiene practices must be followed when marinating or coating seafood – see *Hand hygiene and Personal hygiene*.

Batters, marinades and coatings

- Batters, marinades and coatings must be made-up and used either following manufacturers' instructions, or to own tried and tested recipes.
- Food additives that are only permitted in limited amounts must be added in quantities that ensure those limits are not exceeded in the final product.
- Made-up/bulk batters, coatings and marinades must either be stored chilled and covered until use; or stored following manufacturers' instructions.
- Batters, coatings and marinades must be applied hygienically and seafood stored chilled until it is either processed further or sold.
- Batters, marinades and coatings left over from processing are thrown away at the end of the processing day.

What if there is a problem?

If:

- Own recipes are not followed, or manufacturers' instructions are ignored.
- Batters, marinades and coatings are not stored properly or are not discarded at the end of each day.
- Allergenic ingredients are allowed to cross-contamimate other products or are not identified in ingredients.

Identify what caused the problem, change practices and train/retrain staff to prevent a recurrence.

Write it down

You must write down in the Cleaning schedule the surfaces and equipment used, when they need to be cleaned (and sanitised); how this is done, and by whom.

You must write down (e.g. in the Diary) what action you have taken if marinating or coating has not been carried out correctly.

Keep a copy of the recipe and method for each marinade and coating. This will help ensure consistency of ingredients each time it is made-up and accuracy of the formulation. This can be found (state where recipe kept):

Identify on the recipe ingredients containing allergens.

Fish Safe

Cooking seafood and other foods

Goal

To ensure seafood and other foods are properly cooked.

Act requirements:

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

Why?

- If readily perishable food that needs cooking to make it safe to eat is not cooked thoroughly all the way through to kill harmful microbes customers could be made ill.
- Harmful microbes are invisible to the human eye and cannot be physically removed from food.
- The Australia New Zealand Food Standards Code (the Code) requires cooked crustacea to be free from Salmonella.

How this is done

Food must be prepared hygienically – see *Preventing cross-contamination, Preparing raw meat, poultry, fish; Defrosting frozen food*.

Surfaces and equipment must be in sound condition and clean before use. Surfaces in contact with ready-to-eat foods must be sanitised before use – see *Cleaning and Equipment, packaging and other items, Maintenance and Food allergens*

Good hand hygiene and personal hygiene practices must be followed when handling food – see *Hand hygiene and Personal hygiene*.

When using a themometer the procedure *Checking temperatures and calibrating thermometers* is followed.

Fish and shellfish

Fish and shellfish must be checked for thorough cooking

- Look for change in colour and texture when cooked – for fish this will depend on the species.
- Prawns will turn from blue-grey to pink and scallops become milky white and firm when cooked.
- Before cooking, any mussel or clam with a damaged shell or an open shell that won't close when tapped is thrown away as it may not be safe to eat.
- To check that a mussel or clam is cooked, make sure the shell is open and that the mussel or clam has shrunk inside the shell. If the shell has not opened during cooking, throw it away.
- See also *Validating a hot smoking process for ready-to-eat finfish and shellfish, Checking hot smoked finfish and shellfish are cooked*.

Crustacea

Cooked prawns and lobster have turned from blue-grey to pink – see also *Validating a cooking process for crustacea and Checking crustacea are cooked*.

Frozen products

- Products that need to be thawed before cooking must be thoroughly defrosted – see *Defrosting frozen food*.
- Manufacturer's instructions must be followed when cooking products designed to be cooked from frozen.
- Cooked food must be checked that it has been cooked-through thoroughly.

How this is done

Cooking processed foods

- Manufacturer's instructions, if provided, must be followed for cooking manufactured and processed foods.
- Each time food is cooked (identify which applies):

☐ it is checked that it has been cooked-through thoroughly;

☐ time/temperature settings that will consistently cook food thoroughly have been identified, have been validated and are followed for each product. This information can be found (specify where):

Meat and poultry

- Meat and poultry must be cooked-through thoroughly following procedures in the Plan – see specialist sections for either *Meat Safe* or *Deli Safe*.
- Liquids (e.g. soups, sauces)
- Cold spots are avoided by stirring frequently so that an even temperature is reached.
- Liquids are brought to a boil.

Eggs and egg pulp

- Whole eggs must be free from cracks, are clean and used within their "Best-before" date
- pasteurised egg-pulp is used for lightly-cooked foods
- egg-pulp used in accordance with its date mark.

Making "allergen-free" or "gluten-free" products

Products that are sold as not containing allergens or gluten or similar must be processed and handled so as not to become contaminated by products that contain allergens or the 'free' ingredient, such as by:

- making and handling products known to contain allergens/ gluten after other products with thorough cleaning in between;
- ensuring allergen/gluten-free products are always stored/ retarded/proved/baked/displayed etc. so as not to come into contact with other products.

Equipment used with allergen/gluten-free products – e.g. scale pans, mixer, divider, moulder, tins, trays, knives etc. – are (identify which applies):

☐ dedicated for use with allergen/gluten-free foods and stored separately, or

☐ cleaned thoroughly before using with allergen-free food – see *Cleaning*.

See also *Preventing cross-contamination, Food allergies*

What if there is a problem?

An ammonia smell in fish is a sign of decomposition and the fish must not be sold.

If food is undercooked, cook it for longer.

If this happens frequently, check recipes and change cooking times and/or temperatures, divide food into smaller quantities or use different equipment.

Retrain staff as necessary.

Write it down

If you use a validated cooking process you must write down the cooking temperature and time it takes to thoroughly cook seafood in Validating a cooking process

If food does not cook properly when following set recipes and procedures you must record (e.g. in the Diary) what you did with the food and what action you took to prevent this happening again.

Fish Safe

Validating a cooking process for crustacea (e.g. crab, lobsters, crays, prawns)

This is what you can do if you regularly cook crabs, lobsters, crays or other crustaceans and you don't want to check the food temperature each time you cook it.

You will need to use the same equipment and the same standard ingredients (the same size or weight of the same type of food) each time you cook the product. The following process will enable you to demonstrate (i.e. validate) that a standard cooking procedure will properly cook the food.

1. Cook using a standard cooking method (e.g. a temperature setting for a set time)
2. At the end of the set time, check the temperature of the centre of the thickest part of the food item with a probe thermometer to measure if it has either exceeded 75ºC or met one of the time/temperature combinations from the table below.

Internal temperature	Time	Internal temperature	Time
60ºC	For 45 minutes	**70ºC**	For 2 minutes
63ºC	For 18 minutes	**73ºC**	For 1 minute
65ºC	For 10 minutes	**75ºC**	For 15 sec
68ºC	For 4 minutes		

3. Write down the result of your time/temperature checks in the table below.
4. Repeat the standard cooking method in steps 1 and 2 on at least three separate occasions until confident a safe temperature will be consistently reached for the time required.

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

When you are confident that the standard procedure ensures that the food is cooked, regularly check with a probe thermometer – such as once-a-week, or every fifth batch – that the cooking method continues to work as planned.

Food item and description (recipe, size/weight, thickness):							
	Select the temperature the poultry item will be cooked to: [tick as appropriate]						
	☐ Cooked to higher than 75ºC	☐ Cooked at _____ ºC for _____ minutes					
	Cooking details						
Date	Method (How was the food cooked?) What equipment was used? What cooker temperature setting was used? Where was the probed sample positioned in the cooker?	Time started cooking	1st probe* time	1st probe* temp	2nd probe time	2nd probe temp	Initials
1st							
2nd							
3rd							

*if the temperature is higher than 75ºC it isn't necessary to probe a second time

Food item and description (recipe, size/weight, thickness):							
	Select the temperature the poultry item will be cooked to: [tick as appropriate]						
	☐ Cooked to higher than 75ºC	☐ Cooked at _____ ºC for _____ minutes					
	Cooking details						
Date	Method (How was the food cooked?) What equipment was used? What cooker temperature setting was used? Where was the probed sample positioned in the cooker?	Time started cooking	1st probe* time	1st probe* temp	2nd probe time	2nd probe temp	Initials
1st							
2nd							
3rd							

*if the temperature is higher than 75ºC it isn't necessary to probe a second time

You can make copies of the above validation tables if you have other items that you cook this way.

Fish Safe

Checking crustacea are cooked

It is important that all crustaceans cooked on-site are thoroughly cooked. The table below enables you to identify the process followed for each type of crustacean to ensure that it is properly cooked.

Write it down

Use the table below to identify and record which checks are done to make sure that crustaceans are properly cooked.

Step 1 – In column A write down all the seafood items that need checking.

Step 2 – In column E tick the box to show that either the item will be cooked to more than 75°C, or identify the time/temperature that has been validated as thoroughly cooking the item.

Step 3 – In columns B to D identify how you check that each item is properly cooked.

- If you temperature probe each item every time it's cooked tick the box in column B. Each time you cook this item write the temperature it has been cooked to on the Cooking temperature record.
- If you cook a number of the same items together and temperature probe one item in each batch, tick the box in column C. Each time you cook a batch of this item write the temperature of the probed item on the Cooking temperature record.
- If you have a proven time/temperature setting for the item (you have completed the Validating a cooking process procedure for that item) tick the box in column D. Then regularly – such as once a week, or every fifth time that the item is cooked – measure the temperature when cooking the item to confirm that the time/temperature still cooks it.
- Write this temperature in the Diary..

Internal temperature	Time	Internal temperature	Time
60°C	For 45 minutes	**70°C**	For 2 minutes
63°C	For 18 minutes	**73°C**	For 1 minute
65°C	For 10 minutes	**75°C**	For 15 sec
68°C	For 4 minutes		

A	Temperature probe (tick as appropriate)			E
Crustacea (list each type)	**B Every item, every time**	**C One item in every batch**	**D One item regularly, e.g. once a week or every 5th batch**	**Temperature item must reach in thickest part (tick as appropriate)**
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins

Fish Safe

Smoking products

Goal

To ensure that food is smoked hygienically, using materials that won't impart toxic substances to food, and in ways that prevent the growth of harmful organisms.

Act requirements:

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

Why?

- Smoking moist food in the temperature danger zone (5ºC to 60ºC) will allow harmful microbes to grow.
- Smoke flavours need to meet requirements of the Australia New Zealand Food Standards Code (the Code).
- Smoking materials that have been impregnated with chemicals could make people ill.

How this is done

Control of *Listeria monocytogenes* is an important part of this process (see also *Listeria* in the management section).

This procedure only applies to the following processes:

- **Smoking at 5ºC (or below) to impart flavor only.**
- **Smoking at high temperatures that cook food**

If you want to make cold smoked ready-to-eat (RTE) products when operating with this plan you must speak to your verifier first.

Surfaces and equipment must be in sound condition and clean before use. Surfaces in contact with ready-to-eat foods must be sanitised before use – see *Cleaning and Equipment, packaging and other items, Maintenance and Food Allergens*.

Food must be prepared hygienically – see *Preventing cross-contamination, Preparing raw seafood, Defrosting frozen food*.

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

Smoke flavours are food additives and must meet the requirements of the Code, Standard 1.3.14 – see *Food composition and Composition of seafood products*.

Only untreated wood that is guaranteed free from toxic substances (such as paint and preservative chemicals) must be used as a source of smoke.

Wood chips must be stored dry and be used free from fungus and microbial growth.

Smoking must be carried out in ways that don't allow harmful organisms to grow.

Seafood must not be held in the temperature danger zone (5ºC to 60ºC) during smoking.

Smoking is best done in a temperature controlled space (e.g. a room or in monitored equipment). This produces more consistent product than using a smoke house where temperature is managed manually.

Consumers must know if they need to cook a product to make it safe to eat – see *Food labelling*.

How this is done

Smoking products

Only fresh seafood must be smoked.

Smoke equipment – e.g. heating, air circulation – must be checked as operating properly before loading product.

Smoked products made by the business are: [identify which applies]:

- ☐ cooked by the business before sale – see *Cooking seafood and other food, Checking crustacea are cooked; Checking hot smoked seafood is cooked.*
- ☐ cooked by the consumer after purchase;
- ☐ ready-to-eat un-cooked;
- ☐ shelf-stable (they are safe to eat when not stored refrigerated).

Smoking is carried out [identify which applies]:

- ☐ in a temperature-controlled space, or
- ☐ the smoking temperature profile is manually controlled – see Checking hot smoked seafood is cooked

The smoking process must ensure that:

- product is spaced evenly to help air circulation and even smoking of product;
- only untreated wood is used to make the smoke, or
- liquid smoke is used in accordance with manufacturers' instructions.

After smoking

When it has been smoked, RTE food must be stored at or below 5ºC and must be either [identify which applies]:

- ☐ marked with the date and time it was smoked, and then either used, or sold to be consumed, within 5 days of processing; or
- ☐ given a "Use-by" date using information identified through technical assessment. Assessments are found at: _____

See also *Calculating shelf life*.

What if there is a problem?

If smoking is also intended to cook product, and it is not cooked at the end of smoking, it could mean that there has been equipment malfunction and product will need to be thrown away.

Check that smoke house equipment (e.g. heating, air circulation) is operating properly.

Product that has been exposed for an unknown time to temperatures in the danger zone must be thrown away.

If a smoked product that needs cooking is mistaken for RTE food remove it from sale until it meets requirements of the Code. Find out what went wrong and take steps to prevent it happening again. Retrain staff if necessary. See also Recalling food.

Smoking produces chemicals that can help to inhibit the growth of some microorganisms. It also imparts flavour and colour to products. It is important to know what type of product is produced at the end of hot or cold smoking because this will determine how it needs to be handled:

- Will it be ready-to-eat (RTE) when it leaves the smoker?
- Will it become RTE from further processing by the business/another business?
- Will it need to be cooked by the consumer to make it safe to eat?

Smoking may be used with other preservation methods such as pickling in vinegar

Write it down

You must write down on the Smoking record for each batch:

Where smoking is part of the cooking process:

- the smoke house air temperature
- the time that it will take at that temperature for the centre of the food to reach its cooked temperature
- the smoking start time
- the smoking finish time
- the core temperature of the food at the end of the cooking period
- whether additional smoking/cooking time was needed

You must write down (e.g. in the Diary):

- where smoking is at a low temperature smoking to impart flavor only:
  - the smoke house air temperature
  - the length of time of the smoking process
- anything that went wrong during smoking, and what you did to put it right and ensure that it doesn't happen again.

Do I have to do this every time?

If you can validate that the time and temperature settings you use always cook the product, you may not need to measure product temperature each time – see Checking hot smoked seafood is cooked.

Fish Safe

Validating a hot smoking process

This is what you can do if you regularly hot smoke seafood and you don't want to check its temperature each time you cook it.

You will need to use the same equipment and the same standard ingredients (the same size or weight of the same type of food) each time you cook the product. The following process will enable you to demonstrate – validate – that a standard cooking procedure will properly cook the food.

1. Hot smoke using a standard smoking and cooking method (e.g. a temperature setting for a set time).
2. At the end of the set time, check the temperature of the centre of the thickest part of the food item with a probe thermometer to measure if it has either exceeded 76oC or met one of the time/temperature combinations from the table below.

Internal temperature	mussels	Salmon/oily fish	Cod/lean fish	Other shellfish, crustacea, novel products
60	32.5 min	26.5 min	12 min	45 min
63	6 min	8.5 min	4.25 min	13min
65	2.25 min	4.5 min	2.25 min	6 min
68	30 sec	112 sec	1 min	112 sec
70	5 sec	34 sec	8 sec	1.5 min
76	0.5 sec	4 sec	1.5 sec	12.5 sec

Times are the minimum times required at the centre of the thickest part of the product and represent a 6D process for *Listeria monocytogenes*. See also **http://www.foodsafety.govt.nz/elibrary/industry/processing-products-draft-seafood-cop/haccp-other-risk-factors-v4_06-11.pdf**

3. Write down the result of your time/temperature checks in the table below.
4. Repeat the standard smoking and cooking method in steps 1 and 2 on at least three separate occasions until confident a safe temperature will be consistently reached for the time required.

If the food does not reach a safe temperature on three occasions increase the smoking time and/or temperature and repeat steps 1-3 above.

When you are confident that the standard smoking procedure ensures that the food is cooked, regularly check with a probe thermometer – such as once-a-week, or every fifth batch – that the cooking method continues to work as planned.

Food item and description (recipe, size/weight, thickness):								
	Select the temperature the poultry item will be cooked to: [tick as appropriate]							
	☐ Cooked to higher than 75ºC	☐ Cooked at _____ ºC for _____ minutes						
	Cooking details							
Date	Method (How was the food cooked?) What equipment was used? What cooker temperature setting was used? Where was the probed sample positioned in the cooker?	Time started cooking	1st probe*		2nd probe		**Initials**
			time	temp	time	temp	
1st							
2nd							
3rd							

*if the temperature is higher than 76ºC it isn't necessary to probe a second time

You can make copies of the above validation tables if you have other items that you cook this way.

Fish Safe

Checking hot smoked seafood is cooked

It is important that all hot smoked ready-to-eat seafood cooked on-site is thoroughly cooked. The table below identifies what checks are done for each item to ensure that it is properly cooked.

Write it down

Use the table below to identify and record which checks are done to make sure that smoked ready-to-eat seafood products are properly cooked.

Step 1 – In column A write down all the seafood items that need checking.

Step 2 – In column E tick the box to show that either the item will be smoked and cooked to more than 76°C, or identify the time/temperature that has been validated as thoroughly smoke and cook the item.

Step 3 – In columns B to D identify how you check that each item is properly cooked.

- If you temperature probe each item every time it's cooked tick the box in column **B**. Each time you cook this item write the temperature it has been cooked to on the *Cooking temperature record*.
- If you cook a number of the same items together and temperature probe one item in each batch, tick the box in column **C**. Each time you smoke a batch of this item write the temperature of the probed item on the *Hot smoking record*.
- If you have a proven time/temperature setting for the item (you have completed the Validating a hot smoking process procedure for that item) tick the box in column **D**. Then regularly – such as once a week, or every fifth time that the item is cooked – measure the temperature when smoking the item to confirm that the time/temperature still cooks it. Write this temperature in the Diary.

Internal temperature	mussels	Salmon/oily fish	Cod/lean fish	Other shellfish, crustacea, novel products
60	32.5 min	26.5 min	12 min	45 min
63	6 min	8.5 min	4.25 min	13min
65	2.25 min	4.5 min	2.25 min	6 min
68	30 sec	112 sec	1 min	112 sec
70	5 sec	34 sec	8 sec	1.5 min
76	0.5 sec	4 sec	1.5 sec	12.5 sec

	Temperature probe (tick as appropriate)			
A **Crustacea (list each type)**	**B** **Every item, every time**	**C** **One item in every batch**	**D** **One item regularly, e.g. once a week or every 5th batch**	**E** **Temperature item must reach in thickest part (tick as appropriate)**
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins
				☐ 75°C or ☐ _____ °C for _____ mins

Fish Safe

Cooling hot food and freezing food

Goal

To cool hot readily perishable food quickly to minimise the length of time it spends in the temperature danger zone.

To freeze foods safely.

Act requirements:

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

Why?

- Food that is not chilled quickly and completely, and food in the temperature danger zone (5ºC to 60ºC) will allow harmful microbes to grow that can make people ill.
- Cooked and chilled ready-to-eat (RTE) food can be contaminated by Listeria and other harmful microbes after cooking by poor handling and cleaning practices.
- Frozen food that is not completely frozen will spoil before the end of its shelf-life and could allow harmful microbes to grow.

How this is done

Control of *Listeria monocytogenes* is an important part of this process (see also *Listeria* in the management section).

Surfaces and equipment must be in sound condition and clean before use. Surfaces in contact with ready-to-eat foods must be sanitised before use – see *Cleaning and Equipment, packaging and other items, Maintenance and Food Allergens*.

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

When using a thermometer the procedure Checking temperatures and calibrating thermometers is followed.

When hot, readily perishable food that is cooling reaches 60ºC, further cooling must be done quickly so that it spends the least amount of time in the temperature danger zone.

Cooling hot food

Hot readily perishable food must be:

- cooled quickly to 5ºC or below;
- protected from contamination during cooling.

This must be done by (identify method(s) used):

☐ cooling from 60ºC to 21ºC in 2 hours and from 21ºC to 5ºC within a further 4 hours (total time max. 6 hours). Food is regularly checked to ensure it has cooled within this time frame using a probe thermometer; or

☐ cooling using a method that has been validated to show that food is kept safe. Validation documents are available at (identify where this information is kept): _____.

See also *Readily perishable food, Checking temperatures and calibrating thermometers*.

Ways to speed up cooling include:

- using a blast chiller;
- putting food into thin layers in a large tray made of a material (e.g. metal) that conducts heat well;
- dividing food into smaller portions to increase surface area;
- hanging or placing food on a rack to improve air circulation around it;

How this is done

- moving hot food to a colder area;
- placing sealed packs of food into cold/iced water;
- standing pans of hot food in cold/iced water;
- stirring hot liquid as it cools;
- using the 'cool' setting on an oven or prover (the oven/prover needs to be cool first!).

Using cooled food

Readily perishable RTE food that has been cooked and cooled must be stored at or below 5oC. This food is either: (identify method(s) used)

☐ marked with the date it was cooked and cooled. It is then used, or sold to consumers to use, within 5 days of cooling; or

☐ provided with a 'use-by' date that has been calculated to ensure that the food will be safe to eat until this time – see Calculating shelf life, Chilled and frozen food storage.

Freezing food

- food for freezing must be processed and handled in accordance with procedures in the Plan;
- food must be frozen rapidly until it is frozen solid;
- food must not be frozen after its 'use-by' or 'best-before' date;
- food for freezing is best frozen when it is fresh, not at the end of its shelf-life;
- food freezes quicker when it is:
  - packaged in small quantities;
  - placed in the freezer in a way that allows cold air to come into contact with as much of the surface as possible.

What if there is a problem?

If cooked readily perishable food has not been:

- cooled from 60ºC to 21ºC in two hours and from 21ºC to 5ºC in a further 4 hours; or
- cooled using a validated method;
- it must be thrown away.

Try alternative cooling methods to find one that will cool food to 5oC within the required time.

Cooked and cooled readily perishable RTE food that does not have an accurately calculated 'use-by' date and which has not been used within 5 days of cooling must be thrown away.

Write it down

You must write down (e.g. in the Diary):

- The temperature checks made on food items that have been cooled down.
- Any problems that you have had in cooling food to 5oC in the required time and what action you took.
- Any problems that you have had in freezing food and what action you took.
- Details of any items that you have had to throw away.
- Details of any other matters that you followed-up as a result of the above (e.g. staff training, review of cooling/freezing

Take care when putting cooling food in a chiller that it is not so hot that it raises the temperature of other food.

Fish Safe

Hot-holding food

Goal

To keep hot food at a safe temperature.

Act requirements:

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

Why?

- Food in the temperature danger zone (5ºC to 60ºC) will allow the rapid growth of harmful microbes that can make people ill.

How this is done

Surfaces and equipment must be in sound condition and clean before use. Surfaces in contact with ready-to-eat foods must be sanitised before use – see *Cleaning and Equipment, packaging and other items, Maintenance and Allergens*.

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

When using a thermometer the procedure Checking temperatures and calibrating thermometers is followed.

Food must either be thoroughly cooked or reheated-through FIRST before it is hot-held – see *Reheating food*. Manufacturer's instructions for using hot-holding equipment must be followed where these are available.

Hot holding

Hot-holding equipment such as warming cabinets:

- must be capable of keeping food above 60ºC;
- must not be overloaded.

Hot-held food for customer self-selection must be: [identify which applies]

☐ Pre-wrapped before it is hot-held.

☐ Un-wrapped but covered to protect it from contamination.

- Utensils that are provided to assist customers handle hot foods must be kept clean;
- Food that is hot-held for more than 2 hours must be temperature-checked every 2 hours throughout the trading day to ensure that it is above 60ºC;
- Displays of unwrapped foods must be regularly checked to ensure that they are protected from contamination and that there are sufficient clean utensils provided for customers to use;
- New batches of food must not be mixed with old batches;
- Hot-held food that has been kept at 60ºC or above must, at the end of the trading day, be either [tick which applies]:

☐ If suitable for use the following day – cooled down and stored below 5ºC and sold cold; or

☐ thrown out;

☐ other (please state) Shaded space for writing.

See *Cooling hot food and freezing food, Reusing food that has been for sale, Food labelling*.

How this is done

A probe or infra-red thermometer must be used to check the temperature of food that has been hot held for longer than 2 hours. See *Checking temperatures and calibrating thermometers*.

What if there is a problem?

If hot food is at a temperature between 60ºC and 5ºC for more than 2 hours it must either be used straightaway or be thrown away.

Replace food and/or utensils that could have become contaminated through poor food handling practices or misuse.

Throw away food that may have been contaminated by staff or customers.

Retrain staff where necessary.

Write it down

You must:

- Write down in the Hot-held food record the temperature of food that has been hot-held for 2 hours or longer.
- Write down (e.g. in the Diary) any problems that you have had in hot-holding food at an internal temperature of 60oC and what action you took.
- Write down (e.g. in the Diary) any items that you have had to throw away, and why and any matters that might need following up (e.g. maintenance, training, review of cleaning schedule etc.).

Fish Safe

Reheating food

Goal

To reheat food quickly and thoroughly.

To reduce the amount of time readily perishable food is held in the temperature danger zone.

The Act requires:

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

Why?

- Microbes can survive in food that is not thoroughly reheated to the centre.
- Food in the temperature danger zone (5°C to 60°C) will allow harmful microbes to grow that can make people ill.
- Repeatedly reheating and cooling food can allow microbes to grow that produce toxins which are not destroyed by heat.

How this is done

Surfaces and equipment must be in sound condition and clean before use. Surfaces in contact with ready-to-eat foods must be sanitised before use – see *Cleaning; Equipment, packaging and other items; Maintenance; and Allergens*.

Good hand hygiene and personal hygiene practices must be followed when handling food – see *Hand hygiene and Personal hygiene*.

When using a thermometer the procedure *Checking temperatures and calibrating thermometers* is followed.

Only food that has been cooked and then chilled straight away (cook-chill) (e.g. by following the Cooling hot food and freezing food procedure) may be reheated. Food that has been hot-held and then chilled must, if it is safe and suitable for further use, be used cold; otherwise it should be thrown away – see *Re-using food that has been for sale*.

Food must not be reheated more than once before it is sold.

Reheat food well

Only equipment that can reheat food effectively must be used. Warming cabinets must not be used to reheat food because they can't reheat food quickly enough.

The following equipment is used to reheat food [tick which applies]:

- ☐ microwave (note: observe mixing and standing times);
- ☐ convection/fan oven;
- ☐ pot/pan etc;
- ☐ other (state what equipment used) _____.

When reheating cook-chill foods containing meat or poultry a thermometer must be used to check that it reaches an internal temperature of 75°C or more – see *Checking meat and poultry is cooked*.

Where possible stir or mix food to make sure there are no cold spots and the food is evenly reheated.

Other foods must be checked that they have been reheated thoroughly all the way through.

What if there is a problem?

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

If reheated food is cooled and reheated further, find out why and take action to stop it happening again and, if needed, retrain staff.

Write it down

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

You must also write down (e.g. in the Diary):

- any problem that you had in reheating food, what you did and what action you took to stop it happening again.
- any items that you have had to throw away and why.

Use of plastics in microwave ovens

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

Fish Safe

Handling, displaying, serving ready-to-eat food

Goal

To safely handle, display and serve readily perishable and ready-to-eat (RTE) foods.

Act requirements:

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

Why?

- Food in the temperature danger zone (5ºC to 60ºC) will allow harmful microbes to grow that can make people ill.
- Harmful microbes can contaminate food through unclean people, other foods, equipment and utensils.
- Food contaminated by chemicals or toxins can cause illness.
- Objects can fall into uncovered food affecting its suitability and/or safety.

How this is done

Control of *Listeria monocytogenes* is an important part of this process (see also *Listeria* in the management section).

Surfaces and equipment must be in sound condition and clean before use. Surfaces in contact with ready-to-eat foods must be sanitised before use – see *Cleaning and Equipment, packaging and other items, Maintenance and Allergens*

Good hand hygiene and personal hygiene practices must be followed when handling food – see *Hand Hygiene and Personal hygiene*

Products that are not in packaging must be protected from contamination. Displays of food for customer self-selection must be regularly checked that food is protected from contamination, that clean utensils are provided, and any temperature control equipment is operating to keep food at the necessary temperature – see *Readily perishable food and Chilled and frozen food storage*.

Handling at assisted service displays

RTE foods that are taken out of manufacturers packaging are [tick activity(ies)]:

☐ sliced/cut

☐ displayed

☐ repackaged

☐ other [state] _____.

See also *Slicing and packaging, Calculating shelf life*

Food must be made available for assisted service as soon as possible after being removed from manufacturers packaging.

When handling RTE foods:

- Clean utensils must be provided for each type of food. Dirty re-useable utensils are:

☐ regularly replaced throughout the trading day; or

☐ regularly cleaned and sanitised throughout the trading day.

How this is done

- Single-use items must be thrown away after use.

Other equipment used during assisted service is cleaned and sanitised regularly – e.g. at least daily.

Display for sale

Ready-to-eat food must be kept apart from raw food and non-food retail items.

Readily perishable food must be displayed:

☐ at a temperature specified by the manufacturer,

☐ if displayed cold, at a temperature of no more than 5ºC;

☐ if displayed hot, at a temperature of not less than 60ºC;

☐ frozen solid if a frozen food.

Readily perishable food must not be kept out of temperature control for longer than necessary (e.g. when re-stocking displays).

Readily perishable food must be given a shelf-life by: [tick method(s) that apply]

☐ storing chilled and selling to consumers for using within 5 days of manufacture

☐ using information specified by the manufacturer. This information can be found at: _____.

☐ using information identified through technical assessment. Assessments are found at: _____.

See also *Calculating shelf life*.

Customers must be informed of any thawed food that must not be refrozen after purchase – see *Defrosting frozen food*.

Handling and serving

Directly touching RTE food (e.g. with hands) must be kept to a minimum. Hands must be clean whenever handling and serving RTE foods. Wherever possible a clean utensil, or a clean surface (such as wrapping film) must be used to prevent hand contact with RTE foods.

How this is done

Equipment and utensils used for raw foods must not be used for cooked or RTE foods unless they have been cleaned and sanitised before being used;

Foods made on-site and on display must either:

- have information (on or close-by) so that customers can make an informed choice; or
- have staff able to provide information about the food if they are asked by a customer.

New batches of food must not be mixed with old batches.

Where raw and RTE foods can be handled at the same time – such as when attending to a customer order – whenever possible, RTE foods are handled before raw foods;

Food on display at end of trading

Wrapped and unwrapped readily perishable food on display is:

- returned to chiller or freezer if suitable for use the next day – e.g. it is within its 'Use-by' date and has not been displayed in the temperature danger zone;
- thrown away.

See also *Re-using food that has been on display.*

What if there is a problem?

Throw away:

- food that has been contaminated by dirty equipment or where contamination is suspected;
- food beyond its 'Use-by" date code;
- food that has not been stored/displayed in accordance with manufacturer's instructions, or according to the Plan.

Replace utensils that could have become contaminated.

Change practices and/or retrain staff where necessary.

Write it down

You must write down:

- each day (e.g. in the Diary):

– the temperatures of readily perishable foods stored and displayed

– what action you have taken if food has not been handled or displayed correctly.

- in the Cleaning schedule the surfaces and equipment used, when they need to be cleaned (and sanitised); how this is done, and by whom.

Write down in the Ready-to-eat foods list each manufactured RTE product used that is taken out of its manufacturers packaging, it's storage temperature and shelf-life information.

Write down in the Ready-to-eat foods – batch record the details of each batch of RTE product used to show how it meets it's shelf-life when sold.

Fish Safe

Slicing and packaging

Goal

To ensure that slicing and packing of Ready-to-eat (RTE) food is carried out hygienically.

Act requirements:

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

Why?

- RTE food is not processed further to make it safe to eat.
- Dirty slicing equipment, hands, surfaces and packaging materials can contaminate RTE food with harmful microorganisms that can make people ill.

How this is done

Control of *Listeria monocytogenes* is an important part of this process (see also *Listeria* in the management section).

RTE foods must be protected from coming into contact with potentially contaminated surfaces, such as equipment, raw foods, hands.

Surfaces and equipment must be in sound condition and clean before use. Surfaces in contact with ready-to-eat foods must be sanitised before use – see *Cleaning and Equipment, packaging and other items, Maintenance and Food allergens.*

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

Containers, trays, pallets and boxes that have been used for raw materials must not be used for RTE food – See *Equipment, packaging and other items in contact with food.*

Staff must be able to handle RTE foods hygienically – see *Competency and training.*

Slicing and packing

RTE foods (e.g. hams, cooked meats) must be sliced and packed (identify which applies):

- ☐ in a separate room to raw foods, or
- ☐ in a defined area but separate from raw foods, or
- ☐ in the same place but at a different time to raw foods and with thorough cleaning and sanitising in between. (raw foods should be handled after RTE foods).

RTE foods are sliced and packaged (identify which applies) using:

- ☐ dedicated equipment (e.g. slicer, vacuum-packer, work surfaces, utensils);
- ☐ shared equipment that is thoroughly cleaned and sanitised (including, where necessary, taking it apart to clean hard-to-reach places) before use for RTE foods.

How this is done

When slicing and packaging:

- Directly touching RTE food (e.g. with hands) must be kept to a minimum. Hands must be clean whenever processing RTE foods. Wherever possible a clean utensil, or a clean surface (such as wrapping film) must be used to prevent hand contact with RTE foods.
- Equipment and utensils used for raw foods must not be used for cooked or RTE foods unless they have been cleaned and sanitised before being used.
- A ready supply of clean utensils, including display trays, tongs, must be provided for hygienic handling.
- Display signs and other items that may come into contact with unwrapped foods must be cleaned and sanitised at least daily.
- Food must be returned to chilled storage/display after slicing/packaging;
- Food must be labelled appropriately according to how it is sold – see *Labelling, Calculating shelf life, Handling, displaying, serving RTE foods.*
- Where RTE foods might be handled at the same time as raw food (e.g. when attending to a customer order) whenever possible, RTE foods are handled before raw foods.
- New batches of sliced products must not be mixed with old batches.

What if there is a problem?

Product past its "use-by" date must be thrown away.

Food that comes in contact with dirty surfaces (e.g. dropped on floor) must be thrown away.

Surfaces/equipment/utensils that have not been cleaned must be cleaned and sanitised before they are used for RTE foods.

Find out why this happened and take action to prevent it happening again. Review staff training.

Write it down

You must write down in the Cleaning schedule the surfaces and equipment used for slicing and packaging RTE foods, when they need to be cleaned (and sanitised); how this is done, and by whom.

Write down (e.g. in the Diary):

- If something goes wrong with slicing and packaging and what you did to put things right
- what you did with food that was affected.

Ideally RTE foods are handled in separate places to raw foods using equipment and utensils dedicated to RTE food to minimise the chance of cross-contamination with harmful organisms. See also *Listeria*.

Fish Safe

Re-using food that has been for sale

Goal

To safely use food that has been on display for sale.

Act requirements:

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

Why?

- It is illegal to sell food past its "Use-by" date code
- Food in the temperature danger zone (5°C to 60°C) will allow harmful microbes to grow that can make people ill.

How this is done

Control of *Listeria monocytogenes* is an important part of this process (see also *Listeria* in the management section).

Surfaces and equipment must be in sound condition and clean before use. Surfaces in contact with ready-to-eat foods must be sanitised before use – see *Cleaning and Equipment, packaging and other items, Maintenance and Allergens*

Good hand hygiene and personal hygiene practices must be followed when handling food – see *Hand Hygiene and Personal hygiene*

Special care must be taken to handle food that will be re-used by the business. It must:

- have been processed and handled according to the plan; and
- be within its "use-by" date coding.

Hot-held food that can be re-used must be cooled and sold cold. It must not be reheated – see *Cooling hot food and freezing food*.

Example of reusing food

Pieces of fish have been cooked, portioned, wrapped and hot-held following the procedures contained in the FCP.

They are on display and unsold at the end of the trading day, so are cooled then put in the chiller overnight following the Cooling hot food and freezing food procedure.

The next day the pieces are shredded, a dressing added and the mixture used as sandwich filling.

As the cooled fish had previously been hot-held before cooling, it should not be reheated and served hot – see *Reheating food*.

What if there is a problem?

If food has not been properly stored, handled or displayed (e.g. it has become contaminated or has spent too much time in the temperature danger zone) it must not be reused.

Throw away food that has been contaminated or may have become contaminated

Find out why this happened and take steps to prevent this from happening again.

Retrain staff as necessary.

Write it down

You must write down in the Food that can be reused list the food being re-used, how it will be re-used how it will be handled to keep it safe.

Each week (e.g. in the Diary) confirm that the practices for reusing food have been followed.

You must write down (e.g. in the Diary):

- any problem that you have had in re-using food and what action you took to ensure that it did not happen again; and
- what you did with food that was affected.

Guidance

Calculating shelf-life

The information on this page is provided to help with calculating the shelf-life of ready-to-eat (RTE) products taken from their original manufacturers wrapping.

An example of calculating the shelf life of an opened product

A vacuum-pack side of smoked salmon was given two months chilled shelf life when packed by the manufacturer.

It is opened by a retailer with 12 days shelf life remaining and:

- some of the salmon is shaved and placed on a tray in a display case using the good hygienic practices identified by the business
- the rest is re-wrapped and put back in the chiller along with details of the original shelf-life and date of opening.

Information provided by the manufacturer identifies that, once opened:

- The whole side has a chilled shelf-life of ten days (which includes the day it is opened)
- The side when shaved has a chilled shelf-life of six days.

The business wants to ensure that there is no risk that these dates are exceeded. It calculates that:

- shaved salmon can be displayed chilled up to 1 day (including the day of shaving), and the customer will be given a further 2 days from date of sale to use it;
- smoked salmon returned to the chiller can be sliced for up to three days (starting with the day the pack is opened)

The business works out that this would be well-within the manufacturers requirements because:

- the latest that salmon could be shaved is day 3;
- the latest a customer could be served is day 4;
- the latest shelf life given a customer would be day 6.

Using this scenario, the latest that the business would open the smoked salmon would be with 10 days of shelf life remaining.

Guidance

Food additives

The information on this page is provided to help with meeting food additive requirements of the Code.

Ingredients permitted at certain levels by the Food Standards Code

Permitted food additives

What can be added to fish and fish products, and the maximum levels permitted, are set out in the Code Standard 1.3.1 at: https://www.comlaw.gov.au/Series/F2015L00396

Standard 1.3.1 is extensive and examples include:

- In frozen fish ascorbic acid and sodium, calcium and potassium ascorbates must not exceed 400mg/kg (parts per million).
- In uncooked crustacea sulphur dioxide and sodium and potassium sulphites must not exceed 100mg/kg.
- In uncooked crustacea citric acid and sodium, potassium, calcium and ammonium citrates may be added at a level in accordance with good manufacturing practice.
- In cooked crustacea sulphur dioxide and sodium and potassium sulphites must not exceed 30mg/kg.
- In semi-preserved fish and fish products annatto extracts must not exceed 10mg/kg.
- In semi-preserved fish and fish products sorbic acid and sodium, potassium and calcium sorbates must not exceed 2500 mg/kg.
- In semi-preserved fish and fish products ethyl laurol arginate must not exceed 400mg/kg.
- Roe must contain no more than 30omg/kg amaranth.

Other permitted additives

The Code places limits on the amount of other food additives that can be present in certain fish products, such as benzoic acid, and additives that may be added at limits governed by good manufacturing practice, such as pyrophosphates and sodium carbonates.

Guidance

Limits for harmful microbes

The information on this page is provided to help with meeting food additive requirements of the Code.

The Code Standard 1.6.1 sets maximum permissible levels of harmful organisms that may be present in fish and fish products from a minimum of five sample units from one lot of the product:

Food	Microbiological limit
Cooked crustacea	**Coagulase-positive staphylococci/g**: up to 100 organisms is acceptable in any sample; 100-1000 organisms is acceptable in two samples only. If in more than two samples the lot is rejected; More than1000 organisms in one sample and lot rejected. ***Salmonella*/25g**: nil present in 5 samples from lot **SPC/g:** Up to 100,000 organisms is acceptable in any sample; 100,000 to 1 million organisms is acceptable in two samples only. If in more than two samples the lot rejected; More than1 million organisms in one sample and lot rejected.
Raw crustacea	**Coagulase-positive staphylococci/g**: up to 100 organisms is acceptable in any sample; 100-1000 organisms is acceptable in two samples only. If in more than two samples the lot is rejected; More than1000 organisms in one sample and lot rejected. ***Salmonella*/25g**: nil present in 5 samples from lot **SPC/g:** Up to 500,000 organisms is acceptable in any sample; 500,000 to 5 million organisms is acceptable in two samples only. If in more than two samples the lot is rejected; More than5 million organisms in one sample and lot rejected.
Bivalve molluscs other than scallops	***Eschericia coli*/g:** up to 2.3 organisms acceptable in any sample; 2.3 – 7 organisms is acceptable in one sample only. If in more than one sample the lot is rejected; More than 7 organisms in one sample and lot rejected.
Ready-to-eat food in which growth of Listeria monocytogenes can occur	***Listeria monocytogenes*/25g**: nil present in 5 samples from lot
Ready-to-eat food in which growth of Listeria monocytogenes will not occur	**Listeria monocytogenes/g** Up to 100 colony forming units is acceptable in any sample (5 samples from lot).

Guidance

Composition

The information on this page is provided to help with meeting food compositional requirements.

Compositional requirements for fish and fish products

The Code Standard 2.2.3 includes definitions, compositional and specific labelling requirements for fish and fish products, including:

- the level of histamine in fish or fish products must not exceed 20mg/kg;
- a declaration must be made to purchasers where raw fish is formed or joined in the semblance of a cut or fillet of fish using a binding system that doesn't involve heat. Cooking instructions must be provided to the purchaser.
- Fish is defined as any cold-blooded aquatic vertebrate and invertebrate including shellfish.

The Code doesn't define specific names for fish. Guidance on fish names is at:

http://www.foodsafety.govt.nz/elibrary/industry/approved-fish-names/

The Code Standard 1.3.3 prohibits the use of carbon monoxide in the processing of fish where its use results in a change to or fixes the colour of the flesh of the fish.

Record

Name of business:

Specialist retail – fish

Records

Place this page in your Plan Contents section

Specialist fish records

Staff training – specialist fish

Cooking temperature checks

Smoking record

Ready-to-eat foods list

Ready-to-eat foods batch record

Foods that can be reused

Hot-held food temperatures

Transported food temperature checks

Record

Staff training – specialist fish

Name:	Telephone:
Position:	Start date:
Address:	

Topic	Relevant	Employee signed*	Supervisor signed†	Date
Essential training				
See also Staff member record for the Basics training	☑			
Training as needed				
Calculating shelf life	☐			
Additives in fish and fish products	☐			
Composition of fish products	☐			
Defrosting frozen food	☐			
Live shellfish	☐			
Preparing raw seafood	☐			
Batters, marinades, coatings	☐			
Cooking seafood and other foods	☐			
Validating a cooking process for crustacea	☐			
Checking crustacea are cooked	☐			
Smoking products	☐			
Checking hot smoked seafood is cooked	☐			
Cooling hot food and freezing food	☐			
Reheating food	☐			
Hot-holding food	☐			
Handling, displaying, serving rte food	☐			
Slicing and packaging	☐			
Re-using food that has been for sale	☐			
Limits for harmful microbes in fish products	☐			
	☐			
	☐			
	☐			

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

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

Other food safety training attended

Date	Details
Notes:	

Record

Cooking temperature checks

Meat, poultry, fish and bakery products containing meat, poultry, or fish that are **not** cooked using a standard time/temperature setting must be checked each time with a thermometer to ensure that they reach at least 75ºC. If the temperature does not reach at least 75ºC, cook the product for longer until it does.

Date	Time	Food	Core Temp			Signed
			1st*	2nd	3rd	

*If temperature is more than 75ºC on first probing, further probing will not be necessary.

Record

Smoking record

Smoked products that have a validated cooking process

Product/ Food type	Food core temp/time needed	Time batch started in smoker	Time batch finished	Food core temperature met✓/×	Further time needed?	If Y, what was done to ensure food cooked?	Signed

Record

Ready-to-eat foods list

List here all the types of ready-to-eat foods that you either make, or take out of the manufacturer's original packaging, and further process e.g. to slice and sell from an assisted display or re-package for self-service.

Food, and manufacturer	How does it need to be stored?	How much shelf life (days) should it have?	How much shelf life (days) does it have once opened?	How much time do we give customers to use this food?	How has shelf-life been determined?
Example *Jones bulk smoked mussels*	*Example* *Chilled <5°C*	*Example* *14 days chilled <5oC – Use-by*	*Example* *5 days (inc day of opening)*	*Example* *2 days before Use-by*	*Example* *Information from manufacturer*

Record

Ready-to-eat foods – batch record

Record here how each batch of readily perishable ready-to-eat food that you sell meets shelf-life requirements.

Date made/ received	Food and manufacturer	Batch No. and Use-by date	Storage temp.	Date manufactured food opened and new Use-by date	Last date for sale	Last date sold/used and anywastage	Signed
500g Seafresh unsliced vac-packed smoked salmon *23 May*	*Chilled <5oC*	*SmoS 18/05/11* *18 June 11*	*10 days whole, 4 days inc first slice (information from manufacturer)*	*Opened Monday 23rd May* *First shaved Tuesday 24th May*	*Friday 27th May*	*Friday 27th May/ nil waste*	*Example C H*

Record

Foods that can be reused

List to identify foods that can be reused and how they are handled.

Type of food for reuse	Has it been handled in accordance with the FCP?	What must be done to keep the food safe until reuse	What food is the reused food used in	What must be done to keep the new food product safe?	What date code is applied to the new food product?	Who checks that this is done?

Record

Hot-held food temperature

Food hot-held for longer than 2 hours must be checked to ensure that its temperature remains above 60℃. Record hot-holding temperatures here.

Date	Food	Temperature	What was done if temperature was below 60°C

Record

Transported food temperature checks

Seafood (other than live shellfish) that needs to be kept cold must be transported at or below 5°C. Food that needs to be kept hot must be transported at 60°C or more. Record transported food temperatures here.

Date	Food	Temperature	what was done if food temperature was either not below 5°C or not 60°C or more