



Name of business:

Food Control Plan

Food Service and Food Retail

Consultation

Specialist Retail – Baking Safe

For retail businesses that process and handle bakery products.

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

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Calculating shelf life

Goal

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

Act requirements:

- Food must be safe and suitable.

Why?

- Food for sale must meet the requirements of the Australia New Zealand Food Standards Code (the Code).
- When food is taken out of its original packaging its shelf-life may change.
- People need to know how long food will be safe to eat.
- Food that is sold with inaccurate shelf-life information could make people 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 must also 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 ready-to-eat 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 must 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*.

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>

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

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)

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.

Write it down

When you make a RTE product and you don't sell it straight away, write down the date it was made and its shelf-life in the Ready-to-eat foods list.

When you take RTE products from their original packaging and you don't sell them straight away, list them together with their revised (opened) shelf-life in the Ready-to-eat foods list.

Use the Ready-to-eat foods - batch list to show how RTE products meet their shelf-life



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>

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Food additives in bread and bakery products

Goal

To ensure that only permitted food additives are used to make bread and bakery 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) Standard 1.3.1 prescribes certain food additives and their amounts that can be added to bread and, bakery, fish and meat products.
- If a non-permitted food 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

Reputable suppliers

All ingredients and packaging must come from reputable suppliers and must be suitable to use in the food made – see *Purchasing and receiving food*.

Food additives and ingredients permitted at certain levels by the Code

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

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>

Examples of food additive requirements are provided in the *Guidance Food additives*

Voluntarily addition of folic acid to bread

In New Zealand it is voluntary to fortify bread with folic acid. The New Zealand (Permitted Fortification of Bread with Folic Acid) Food Standard 2012 allows up to 2.5 micrograms/kg of folic acid to be present in bread.

MPI has developed a user guide to help bakers interpret and apply the requirements. It also contains information for bakers who want to add folic acid to bread at:

http://foodsafety.govt.nz/elibrary/industry/Addition_Folic-Manufacturers_Retailers.pdf (112 KB PDF)

What if there is a problem?

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

If too much of a permitted food additive is present in the finished product, the product must be thrown away unless it can 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 (i.e. validate) that any change to the recipe, ingredients or process continues to make a safe and suitable food.

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Goal

To ensure that bakery products meet microbiological requirements.

Act requirements:

- Food must be safe and suitable.

Why?

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

How this is done**Microbiology of bakery products**

A check is made with suppliers that pre-packaged bakery products comply with microbiological requirements of the Code – see also *Food composition – general, Listeria*.

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.

The Code Standard 1.6.1 sets maximum permissible levels of harmful organisms that may be present in certain foods. Check the Code for the requirements for the products that you make or sell at: <http://www.foodstandards.gov.au/publications/documents/Guidelines%20for%20Micro%20exam.pdf>

Other foods that are not included in Standard 1.6.1 may also support the growth of harmful organisms. Guidance on microbiological levels for harmful organisms found in a range of ready-to-eat products is at: http://www.foodsafety.govt.nz/elibrary/industry/Microbiological_Reference-Guide_Assess.pdf

Examples of limits for harmful microbes are provided in the *Guidance Limits for harmful microbes*.

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.

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Composition of bread and bakery products

Goal

To ensure that bakery products meet definition and compositional requirements.

Act requirements:

- Food must be safe and suitable.

Why?

The Australia New Zealand Food Standards Code (the Code) applies definitions, composition and labeling requirements to foods.

How this is done

Compositional requirements for bakery products

A check must be made that bakery products sold comply with compositional requirements of 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>

Examples of composition requirements for bakery 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 process to identify how this happened and work out how 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 of your calculations to confirm that your products meet compositional requirements of the Code – either in the Diary or with your recipes.

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Defrosting frozen food

Goal

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

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

To ensure that previously frozen food is not refrozen.

Act requirements:

- Food must be processed and handled in ways that minimise the contamination or deterioration of food and 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 from thawing food may contain harmful microbes that might directly contaminate other foods and surfaces used for other foods and 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 before they are refrozen and stored for further processing.

How this is done

Hand washing

Food must be defrosted completely (not frozen in the centre) before it is used as an ingredient (e.g. meat in a pie) unless a manufacturers' instructions say otherwise.

Bakery items that can be defrosted and sold in a thawed state must be thawed following manufacturer's instructions.

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.

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)

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 drips 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.

Thawing foods must be protected against contamination.

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

Once thawed, food is not refrozen.

Customers must be informed if any thawed food should not be refrozen after purchase.

What if there is a problem?

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

Other readily perishable food which has exceeded a temperature of 7°C during thawing for no more than 4 hours but which will be processed to make it safe must be chilled to below 5°C 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.



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.

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Preparing raw meat, poultry & seafood

Goal

To prevent cross-contamination between meat, poultry 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 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?

- Ingredients may need to meet requirements in the Australia New Zealand Food Standards Code (The Code).
- Harmful microbes will grow rapidly at temperatures between 50C to 60oC (the temperature danger zone) and people may be made ill.
- 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.

How this is done

Places and equipment

Situations where cross-contamination could occur between ready-to-eat (RTE) foods and raw foods such as meat, poultry, fish and vegetables must be identified at the business – see *Preventing cross-contamination, Allergens*.

Where possible, surfaces, equipment and places used for preparing raw foods are different to those used for ready-to-eat food – see *Readily 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*

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

All meat, poultry and fish must come from a reputable source – see *Purchasing and receiving goods*

Raw meat, poultry and fish must be prepared (identify which option(s) are applied):

- ☐ 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 where processing and handling is carried out 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 for cooked and ready-to-eat foods;
- ☐ using shared utensils but with thorough cleaning and sanitising in between.

Meat, poultry and fish must be kept covered and chilled when not being prepared.

How this is done

Preparing

When preparing raw meat, poultry and fish:

- it must be suitable for its intended use;
- ingredients must meet the requirements of the Code, Standard 2.2.1 – see *Food composition, Composition of bakery products*;
- it must be chilled or frozen as soon as possible after processing has been completed, or if intended to be sold hot, kept hot at or above 6°C;
- packaging must be carried out hygienically and in ways that prevent cross-contamination from people, raw products and food surfaces.

Frozen food

Frozen meat, poultry and fish must be kept frozen solid until used or thawed. See *Chilled and frozen food and Defrosting frozen food*.

Example of keeping raw and RTE food preparation separate by time

A retail bakery follows the procedures identified in their Plan and cooks and cools poultry to make their own sandwich fillings. They don't have a dedicated raw poultry preparation area so use a preparation board that is identified for 'raw chicken only.' Other utensils used to prepare the poultry are used with other foods.

After checking that utensils are clean and have been sanitised the sandwich filling is made by taking cooled shredded cooked chicken from the 'fridge, adding other ingredients and making a batch of sandwiches. Excess filling is returned to the 'fridge. This is used to make additional sandwiches to order when the initial batch has been sold and any remaining filling is thrown away at the end of the day.

In the early afternoon, poultry is prepared for cooking. When the birds have been put in the oven, the preparation area, the preparation board and all the utensils are thoroughly cleaned, rinsed, sanitised and air dried. Cooked birds are taken out of the oven, the meat is taken off the bone and shredded, cooled and put in the fridge overnight. The area and utensils are thoroughly cleaned again.

What if there is a problem?

Re-clean and sanitise surfaces and equipment that have not been cleaned (or sanitised) properly.

Find out why this happened and take action to prevent it happening again. Retrain staff where 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) what action you have taken if meat, poultry or fish has not been prepared correctly.

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Making bread, cakes and slices

Goal

To prevent bread, cakes and slices from becoming contaminated from:

- Physical contaminants – e.g. stones, pieces of wood, metal, glass etc;
- microbes e.g., bacteria and viruses;
- chemicals e.g. cleaning chemicals, pesticides etc.

To prevent the growth of harmful microbes.

Act requirements:

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

Why?

- Harmful microbes that can cause foodborne illnesses will grow rapidly at temperatures between 50C and 60C (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 enter food (e.g. parts left after maintenance, breakages and poor handling practices) and affect its safety.
- Poor storage and cleaning practices can attract pests.
- Some bakery products need to meet requirements of the Australia New Zealand Food Standards Code (the Code).

How this is done

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, Maintenance and Allergens*

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

Preparation

Ingredients and finished products must meet requirements in the Code – see *Food Composition, Food allergens, Food additives in Bread and bakery products, Composition of bakery products*.

Ingredients must be:

- sourced from reputable suppliers – see Purchasing and receiving food;
- kept chilled until use if readily perishable;
- checked for contamination before being used – e.g. by sieving or dicing into mix;

See also: *Readily perishable food, Perishable and shelf-stable foods, Preparing fruit and vegetables*

Equipment

Bread, cakes, slices must be prepared: (identify which option(s) are applied)

- ☐ in a dedicated area that is physically separate from baked/finished products;
- ☐ in the same area, but separate from baked/finished products;
- ☐ in the same area, but processing and handling is at different times with thorough cleaning (and sanitising) in between (preparation should be after use for baked/finished products);
- ☐ using dedicated utensils (e.g. knives, boards, trays) for preparing and for baked/finished products;

How this is done

- ☐ using shared utensils but with thorough cleaning and sanitising in between.

Yeast

- fresh yeast must be kept chilled and only taken from the chiller in amounts needed at any one time;
- fresh yeast that is dark brown, mouldy, soft or gummy or shows other signs of deterioration or spoilage must be thrown away.

Dairy products

Milk, cream and dairy ingredients must be kept refrigerated at or below 5°C until used.

Eggs and egg-pulp

- Whole eggs must be free from cracks and are clean;
- pasteurised egg-pulp is used for lightly-cooked foods;
- pasteurised egg-pulp is kept and used according to manufacturers' instructions or kept chilled and used according to its "best-before" date mark.

Thawing egg-pulp from frozen must follow manufacturers' instructions or the process in Defrosting frozen food.

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?

Ready-to-eat food that has been contaminated by dirty equipment, surfaces or hands must be thrown away.

Ready-to-eat food where there is a chance that it may have become contaminated by harmful microbes or objects must be thrown away.

Allergen/gluten-free food that may have come into contact with allergen- or gluten-containing products must not be sold as being allergen/gluten-free.

Find out what went wrong and take action to prevent it happening again. Retrain staff where necessary.

Write it down

You must write down in the Cleaning schedule the surfaces and equipment used for preparing food - including the approaches taken for allergen/gluten-free food - and how/when they are cleaned (and sanitised); and by whom.

You must write down (e.g. in the Diary) what action you have taken if bread, cakes or slices have not been prepared correctly.

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Making other bakery products

Goal

To prevent bakery products such as pies and sausage rolls from becoming contaminated from:

- microbes e.g., bacteria and viruses;
- chemicals e.g. cleaning chemicals, pesticides etc;
- Physical contaminants – e.g. stones, pieces of wood, metal, glass etc.

To prevent the growth of harmful microbes.

Act requirements:

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

Why?

- Harmful microbes that can cause foodborne illnesses will grow rapidly at temperatures between 5°C and 60°C (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 enter food (e.g. parts left after maintenance, breakages and poor handling practices) and affect its safety.
- Poor storage and cleaning practices can attract pests.
- Some bakery products need to meet requirements of the Australia New Zealand Food Standards Code (the Code).

How this is done

Surfaces and equipment must be in sound condition and clean before use. Surfaces in contact with ready-to-eat foods (RTE) 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*.

Preparation – ingredients, pastry and dough

- Ingredients and finished products must meet requirements in the Code – see *Food Composition, Allergens, Food additives in Bread and bakery products, Composition of bakery products*.
- Bread doughs and pastry (e.g. for pie casings) must be made following procedures in Making bread, cakes and slices.
- Dough and pastry that is purchased pre-made must be used according to manufacturer's instructions (if any).
- Meat, fish, poultry must be prepared hygienically – see *Preparing raw meat, poultry, fish*.
- Vegetables and fruit must be prepared and handled hygienically. Raw fruit and vegetables used as ingredients must be rinsed thoroughly in clean water before use unless they are received pre-washed or pre-peeled or purchased as ready-to-use – see *Produce and general food – Preparing fruit and vegetables*.
- The same equipment must not be used for cooked or RTE foods and raw foods unless it has been thoroughly cleaned and sanitised first.
- Readily perishable food must be kept at or below 5°C unless it is being prepared.

See also: *Readily perishable food, Perishable and shelf-stable foods, Preparing raw meat, poultry and fish*.

Fillings and toppings

Fillings and toppings for cooked products such as pies must be thoroughly cooked. See *Cooking meat and poultry and Cooking other foods*.

How this is done

If casings are not hot-filled/topped, fillings/toppings must be cooled according to the cooling procedure in the Plan and stored chilled until use. See *Cooling and freezing food*.

Filling casings and topping products must be carried out hygienically.

When filled, products are (identify processes carried out):

- ☐ cooked thoroughly – see *Baking and finishing*;
- ☐ cooled – see *Cooling hot food and freezing food*;
- ☐ reheated – see *Reheating food*;
- ☐ kept hot – see *Hot-holding foods*;
- ☐ not cooked – see *Chilled and frozen food storage*.

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?

Ready-to-eat food that has been contaminated by dirty equipment or surfaces including hands must be thrown away.

Ready-to-eat food where there is a chance that it may have become contaminated by harmful microbes or objects must be thrown away.

Allergen/gluten-free food that may have come into contact with allergen- or gluten-containing products must not be sold as being allergen/gluten-free.

Find out what went wrong and take action to prevent it happening again. Retrain staff where necessary.

Write it down

You must write down in the Cleaning schedule the surfaces and equipment used for preparing food - including the approaches taken for allergen/gluten-free food - and how/when they are cleaned (and sanitised); and by whom.

You must write down (e.g. in the Diary) what action you have taken if bread, cakes or slices have not been prepared correctly.

Baking and finishing

Goal

To ensure bread and bakery products are properly cooked.

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?

- Thorough cooking kills harmful microbes.
- Microbes are invisible to the human eye and cannot be physically removed from food.

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*.

Baking Bread, cakes and slices

- Baking and cooking equipment is pre-heated first;
- Doughs, batters and mixes must be baked or cooked-through thoroughly;
- Deep-frying oil:
 - Must be regularly changed and filtered;
 - must not be used for both regular foods and “allergen-free” or “gluten-free” products.

Baking pre-manufactured products (e.g. pre-frozen or pre-chilled or shelf-stable bakery products)

- The manufacturer’s instructions must be followed when baking-off, cooking or re-heating manufactured products; or
- A time/temperature setting must be identified that will consistently cook products thoroughly;

Bakery products containing processed meat, poultry, fish

Foods containing processed meat, poultry or fish (minced, diced) must be thoroughly cooked. A check must be made that they are thoroughly cooked and that either the centre of the thickest part:

- has reached a temperature for a length of time specified by the manufacturer; or
- has reached a temperature of more than 75°C; or
- has reached a temperature for a length of time that the business has proved cooks the product thoroughly. See also *Making bakery products, Cooking meat and poultry, Cooking other foods*.

Baking “allergen-free” or “gluten-free” products

Allergen/gluten-free products must be baked separate from other foods (such as on racks above any “non-free” product). See *Food Allergens*.

How this is done

Bakery products with fresh cream or custard fillings

Foods containing fresh cream or custard fillings must be kept refrigerated at no more than 5°C. At the end of the trading day, foods containing fresh cream or custard fillings that have been kept refrigerated at or below 5°C must be (identify what happens):

- ☐ stored refrigerated at or below 5°C and sold first next day;
- ☐ thrown away.

Piping bags

Piping bags used must be: (identify which applies)

- ☐ disposable single-use;
- ☐ reusable and separate/dedicated to a particular purpose;
- ☐ reusable and used for a range of purposes and cleaned and sanitised between tasks;
- ☐ replaced as appropriate.

Packaging and packaged products

- products must be packaged hygienically and appropriately labelled where necessary – see *Packaging materials and equipment, Labelling*;
- products that are not packaged for sale must be protected from contamination – see *Readily perishable food, Chilled and frozen food storage and display, Perishable and shelf-stable food storage and display*.

What if there is a problem?

If food is undercooked, cook it for longer. If this happens frequently, check recipes and change cooking times and/or temperatures, or divide food into smaller quantities or use different equipment.

Retrain staff as necessary.

Write it down

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.

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Cooking meat and poultry

Goal

To ensure that meat and poultry, (e.g. a roast joint, a sausage roll, a rotisserie chicken) is thoroughly cooked at the centre of the thickest part.

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?

- If meat, and especially poultry, is not cooked thoroughly all the way through to kill harmful microbes customers could be made ill.

How this is done

Meat and poultry 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 Allergens*

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

Poultry must be always cooked thoroughly and never sold medium or rare.

Meat – unless it is to customer order for immediate consumption – must be cooked-through thoroughly using this procedure.

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

Cooking meat and poultry

- Manufacturer's instructions must be followed to programme cooking equipment.
- Cooking equipment (e.g. oven) must be pre-heated before cooking starts.
- Meat and poultry must be cooked so that the centre of the thickest part either exceeds 75°C or reaches one of the temperature/time combinations below:

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

Checking meat or poultry is cooked

Any cold spot in the cooking chamber must be taken into account when cooking products.

How this is done

Processed meats must be cooked according to the procedure for Bakery products containing processed meat, poultry, fish in Baking and finishing.

Meat and poultry that is cooked for immediate consumption must be cooked following the Serve Safe procedures Cooking poultry and Cooking.

A thermometer (probe or Infra-red (IR)) must be used to check that the thickest part of the meat (the centre of a meat joint, or breast or innermost part of the thigh of poultry) has reached a temperature of at least 75°C or one of the time/temperature combinations above. This must be done in one of the following ways, either:

- each time a meat or poultry item is cooked the temperature is measured; or
- each time a batch of the same items is cooked, the temperature of one item in the batch is measured (taken from a different place each time); or
- when a proven cooking procedure is followed, a one cooked item is checked periodically, to confirm that the necessary temperature has been reached for the required time – see *Validating a cooking process and Checking meat and poultry is cooked*.

It is not necessary to temperature probe diced or thinly sliced meat and poultry because smaller pieces are more likely to cook through to the middle easily. It's also hard to take an accurate reading.

What if there is a problem?

If meat or poultry does not reach a high enough temperature, keep cooking until it does.

When meat or poultry being cooked using a standard time/temperature setting is found not to have been cooked properly, find out why. Here are questions to ask:

- Was the procedure followed correctly?
- Was there a cold spot or does the equipment (e.g., oven) need repairing?
- Was a different size of food (e.g. meat joint or bird) used?

Identify what needs to be done to prevent this happening again.

Retrain staff if necessary.

Write it down

You must keep a record of the temperatures that meat and poultry items are cooked to.

Write down in the Checking meat and poultry is cooked procedure each item cooked and identify which option will be used to check that it is cooked thoroughly.

Meat and poultry cooked using a standard time/temperature setting

You must:

- Write down the checks that have been made to prove that the time/temperature combination will either cook the thickest part of the food to at least 75°C or will ensure that the food is kept at the required temperature for the necessary time - see Validating a cooking process.
- Write down (e.g. in the Diary) the temperatures of meat or poultry that is checked regularly (e.g. weekly or every fifth batch) to ensure that the cooking process still works as intended.

Meat and poultry cooked that are cooked not using a standard time/temperature setting

Every time the food is cooked, you must write down the temperature of each item, or the one item from a batch, checked in the Cooking meat and poultry temperature record.

In addition, you must:

- Write down (e.g. in the Diary) the action taken if food didn't reach a safe temperature.
- Write down in the Cleaning schedule the surfaces and equipment used and how/when they are cleaned (and sanitised); and by whom.

Validating a cooking process

This is what you can do if you regularly cook a meat or poultry item - such as rotisserie-cooking a chicken, roasting a joint, cooking a meat pie, boiling a ham or hot-smoking sausages - and you don't want to check its temperature each time you cook it.

You must 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. If you want to validate your cooking process you must follow the steps in this procedure.

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 75°C or met one of the time/temperature combinations from the table below.

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

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 (e.g. 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]							
<input type="checkbox"/> Cooked to higher than 75°C				<input type="checkbox"/> Cooked at <input type="text"/> °C for <input type="text"/> minutes			
Cooking details							
	Method (How was the food cooked?) What equipment was used? What cooker temperature setting was used?	Time started cooking	1st probe*		2nd probe		Initials
Date	Where was the probed sample positioned in the cooker?		time	temp	time	temp	
1st							
2nd							
3rd							

*if the temperature is higher than 75°C 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]							
<input type="checkbox"/> Cooked to higher than 75°C				<input type="checkbox"/> Cooked at <input type="text"/> °C for <input type="text"/> minutes			
Cooking details							
	Method (How was the food cooked?) What equipment was used? What cooker temperature setting was used?	Time started cooking	1st probe*		2nd probe		Initials
Date	Where was the probed sample positioned in the cooker?		time	temp	time	temp	
1st							
2nd							
3rd							

*if the temperature is higher than 75°C 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.

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Checking meat and poultry items are cooked

Meat, poultry and foods containing raw meat and poultry that are cooked on-site must be thoroughly cooked. The table below enables you to identify the process followed for each meat or poultry 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 meat and poultry items are properly cooked.

Step 1 – In column A write down all the meat and poultry 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	68°C	For 4 minutes
63°C	For 18 minutes	70°C	For 2 minutes
65°C	For 10 minutes	73°C	For 1 minute

A	Temperature probe (tick as appropriate)			E
	B Every dish, every time	C One item in every batch	D One item regularly, e.g. once a week or every 5th batch	
Meat or poultry item (list each type of food)				Temperature item must reach in thickest part (tick as appropriate)
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins
				<input type="checkbox"/> 75°C or <input type="checkbox"/> _____ °C for _____ mins

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Cooking other foods

Goal

To ensure food other than meat and poultry is properly cooked.

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?

- Harmful microbes are present in many foods. Cooking (and reheating) can kill harmful microbes.

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*

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

Cooking equipment must be checked for cold spots – see *Maintenance*

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

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

Meat and poultry

Meat and poultry items must be cooked following the *Cooking meat and poultry* procedure

Bakery products

Bakery items must be cooked following the *Baking and finishing* procedure.

Liquids (e.g. sauces, pie filling)

- Cold spots are avoided (e.g. by stirring frequently) so that an even temperature is reached.
- Liquids are brought to a boil.

Eggs

- 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 must be used in accordance with its date mark.

Fish and Shellfish

Fish and shellfish must be checked for thorough cooking. Look for a 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 must be thrown away as it may not be safe to eat.

How this is done

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.

Processed foods

Products must be cooked according to any manufacturers' instructions, if provided.

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.

Making allergen-free foods

See the procedure in *Making other bakery products*.

What if there is a problem?

An ammonia smell in fish is a sign of decomposition and product 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, or divide food into smaller quantities or use different equipment.

Write it down

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.

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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 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 that is not chilled quickly and completely, and food in the temperature danger zone (5°C to 60°C) 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 procedure

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.

When hot, readily perishable food that is cooling reaches 60°C, 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 5°C or below;
- protected from contamination during cooling.

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

- ☐ cooling from 60°C to 21°C in 2 hours and from 21°C to 5°C 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;
- 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;

How this is done

- 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 5°C. 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 60°C to 21°C in two hours and from 21°C to 5°C 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 5°C 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 5°C 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 methods).



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

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 (5°C to 60°C) 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 60°C;
- 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 60°C;
 - 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 60°C 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 5°C 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 60°C and 5°C 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 60°C 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.).

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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.

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.

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.

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.



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Filling sandwiches, rolls, wraps

Goal

Hygienically making and displaying sandwiches, rolls and wraps.

Safely handling manufactured delicatessen foods (cooked meats, cheeses etc.) and salads.

The Act requires:

- 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 (5°C to 60°C) 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 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 are sanitised before use – see *Cleaning and Equipment, packaging and other items, Maintenance and Allergens*

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

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.

Filling sandwiches/rolls/wraps

Readily perishable fillings and ingredients must be:

- stored and used according to manufacturer's instructions if provided; or
- kept out of the temperature danger zone (e.g. in a refrigerated make-table); or
- taken from refrigeration in only the quantity needed to fill the batch (of sandwiches etc.) and kept outside the temperature danger zone whenever they are not being used; and
- kept apart from raw foods.

Salad ingredients such as lettuce, tomatoes and parsley must be either (identify method(s) used):

- ☐ purchased pre-washed and ready-to-eat;
- ☐ rinsed in clean, running water before use – see *Water*.

Produce must not be used if checks find signs of deterioration or spoilage including:

- discolouration/appearance;
- odour;
- texture;
- mould/slime.

How this is done

Fillings that are prepared in bulk must be:

- labelled with the date prepared;
- thrown away if not used within 2 days.

An existing batch of filling must not be topped-up from other batches.

Display

Filled sandwiches/rolls/wraps must be given a shelf-life by: [tick method(s) that apply]

- ☐ storing chilled and selling to consumers within 48 hours 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*

What if there is a problem?

If RTE food has become contaminated, throw it away

If equipment, surfaces etc. are unclean, clean them before use.

Find out what happened and take action to prevent it from happening again. If needed, retrain staff.

Write it down

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

You must write down (e.g. in the Diary) what happened if fillings were incorrectly used and what was done to stop this from happening again.

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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 (5°C to 60°C) 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, clean utensils are provided, and any temperature control is operating to keep food at the necessary temperature.

Information about foods that must be kept cold or hot to keep them safe is in *Readily perishable food*.

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, or
- if displayed cold, at a temperature of no more than 5°C; or
- if displayed hot, at a temperature of not less than 60°C; or
- 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

- Where raw and RTE foods could be handled at the same time (such as when attending to a customer order) whenever possible, all RTE foods are handled before raw foods.
- 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.

Food on display at end of trading

Wrapped and unwrapped readily perishable food on display must be thrown away unless it will be safe and 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).

It must be either kept in a chiller (if chilled) or freezer (if frozen).

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 in the Ready-to-eat foods list manufactured RTE products that are taken out of the manufacturers packaging, how it must be stored and when it must be used by.

You must write down in the Ready-to-eat foods - batch record the details of each batch of RTE product used to show how shelf life is met when sold.

You must write down each day (eg in the Diary):

- Food storage and display temperatures; and
- what action you have taken if food has not been handled or displayed correctly.

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

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 chicken have been cooked, portioned, wrapped and hot-held following the procedures in the plan.

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 some pieces are sold cold from an assisted service display; the rest are shredded and used as sandwich filling.

As the cooled chicken had previously been hot-held before cooling, it was not reheated.

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 and thrown away.

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.

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Name of business:

Specialist retail – baking

Records

Place this page in your Plan Contents section

Specialist baking records

Staff training – specialist baking

Cooking temperature checks

Once-a-week meat and poultry temperature checks

Ready-to-eat foods list

Ready-to-eat foods batch record

Foods that can be reused

Hot-held food temperatures

Transported food temperature checks

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Staff training – specialist baking

Name:	Telephone:
Position:	Start date:
Address:	

Topic	Relevant	Employee signed*	Supervisor signed†	Date
Essential training				
<i>See also Staff member record for the Basics training</i>	<input checked="" type="checkbox"/>			
Training as needed				
Calculating shelf life	<input type="checkbox"/>			
Food additives in bread and bakery products	<input type="checkbox"/>			
Limits for harmful microbes in bakery products	<input type="checkbox"/>			
Composition of bread and bakery products	<input type="checkbox"/>			
Defrosting frozen food	<input type="checkbox"/>			
Preparing raw meat, poultry, seafood	<input type="checkbox"/>			
Making bread, cakes, slices	<input type="checkbox"/>			
Making other bakery products	<input type="checkbox"/>			
Baking and finishing	<input type="checkbox"/>			
Cooking meat and poultry	<input type="checkbox"/>			
Cooking other foods	<input type="checkbox"/>			
Cooling hot food and freezing food	<input type="checkbox"/>			
Hot-holding food	<input type="checkbox"/>			
Reheating food	<input type="checkbox"/>			
Filling sandwiches, rolls, wraps	<input type="checkbox"/>			
Handling, displaying, serving rte food	<input type="checkbox"/>			
Re-using food that has been for sale	<input type="checkbox"/>			
other	<input type="checkbox"/>			
	<input type="checkbox"/>			
	<input type="checkbox"/>			
	<input type="checkbox"/>			
	<input type="checkbox"/>			

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

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

Other training

Date	Details
Notes:	

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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 probe thermometer to ensure that they reach at least 75°C. If the temperature does not reach at least 75°C, cook the product for longer until it does.

[illegible]

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

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Once-a-week meat and poultry temperature checks

Cooking meat and poultry to at least 75°C

Select one product that you cook using a standard time/temperature to reach at least 75°C. Cook it and check it to confirm that it reaches at least 75°C.

If you cook more than one product this way select a different one each week. Use the following to record your check:

Day	Product	Cooking method and standard time/ Temperature used	Final core temperature	Action taken if Temperature not reached

Cooking below 75°C

Select a product that you cook using a standard time/temperature to a temperature below 75°C (for examples see table below). Cook it and check that the centre of the thickest part of the product has stayed at the required temperature for the correct length of time.

Use the following to record your check:

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

Enter time and temperature used	Date	Time started cooking	1st probe*		2nd probe	
			Time	Temp	Time	Temp
<input type="checkbox"/> cooked at <input type="text"/> °C for <input type="text"/> secs/mins						

*second probe is not needed if core temperature reached at least 75°C

Reheating meat and poultry

Select one product that is reheated and check it reaches 75°C. Use the following to record your check:

Day	Product	Reheating method	Final core temperature**	Action taken if Temperature not reached

** The core temperature of the product must be 75°C or above. If the food has not reached this temperature keep reheating until it does.

Cooling meat and poultry (only required if food has been cooked or heated and then cooled)

Select one hot product and check it cools within the time frame required in the Plan. If you cook and cool more than one meat or poultry product select a different item each week.

Use the following to record your check:

Day	Poultry item	Cooling method	Time started cooling	Temp at 2hrs***	Temp after total 6 hr***	Action taken If temp not reached

*** Products must be cooled from 60°C to 21°C in two hours and 21°C to 4°C within a further four hours. See *Cooling hot food and freezing food*

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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 1kg Jones unsliced vac-packed ham	Example Chilled <5°C	Example 28 days on delivery	Example 10 days whole, 5 days inc day first sliced	Example 2 days including day of purchase	Example Information from manufacturer
Example 1kg own roast beef cooked for slicing	Example Chilled <5°C	Example 5 days from cooking	Example n/a	Example 2 days including day of purchase	Example Laboratory shelf-life testing

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Ready-to-eat foods – batch record

A record to show how each batch of ready-to-eat product meets its shelf-life requirements – see also *Ready-to-eat foods list*.

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
Example 31st March	Example 1kg Jones unsliced vac-packed ham		Example JHam 2 May 2015	Example 1Chilled <5oC	Example Opened and first sliced 2nd April	Example Information from manufacturer	Example 6th April 50gm thrown.	Example C H							
Example 1st April	Example 1kg own roast beef cooked for slicing		Example Beef20 6 April 2015	Example Chilled <5oC	Example n/a	Example Laboratory shelf-life testing	Example 3rd April	Example C H							

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Foods that can be reused

Record of foods that can be reused and how they must be handled when being reused

[illegible]

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Two-hour hot-held food temperature

Hot-held food must be kept hot at 60°C or above. Any food that has been held for two hours must be checked with a thermometer to ensure that it is still at, or above, 60°C. This temperature check must be repeated for every two hours that the food is hot held).

[illegible]

* Time the food commenced hot-holding.

What if food is below 60°C?

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

- thoroughly reheated to 60°C or above, and served hot (above 60°C); or
- cooled to below 5°C and kept at this temperature until it's eaten. Continued cooling needs to ensure that the food has spent no more than four hours between 60°C and 5°C;

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

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Transported food temperature checks

ood that needs to be kept cold (if it is not going to be eaten within 4 hrs of taking out of temperature control) must be transported at or below 5°C.

Food that needs to be kept hot (if it is not going to be eaten within 2 hrs) must be transported at 60°C or more.

Record transported food temperatures here.

[illegible]

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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 of cooked smoked chicken was given a one-month chilled shelf life when packed by the manufacturer. It is to be used for sandwich fillings. It is opened with 24 days shelf life remaining.

- on the day its opened some of the chicken is sliced/shredded;
- the rest is re-wrapped and put back in a chiller together with details of the original shelf-life and date of opening.

Information provided by the manufacturer identifies that, once opened:

- the smoked chicken has a chilled shelf-life of ten days (which includes the day it is opened);
- smoked chicken when sliced has a chilled shelf-life of six days.

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

- sliced smoked chicken will be used from the chiller in sandwiches for up to 2 days (including the day of slicing), and the customer will have a further 2 days from date of sale to eat the sandwich;
- smoked chicken returned to the chiller can be sliced for up to three days (starting with the day the ham is opened).

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

- the latest that smoked chicken should be sliced is day 3;
- the latest a customer should 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 cooked smoked chicken would be with 10 days of shelf life remaining.

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Food additives

Guidance on Permitted food additives in bread and bakery products

The Code places limits on the amount of food additives that can be in breads and bakery products, for example:

- breads and bakery products must contain no more than 1200mg/kg (parts per million) sorbic acid and sodium, potassium and calcium sorbates;
- biscuits, cakes and pastries must contain no more than 25 mg/kg annatto extracts, and no more than 300mg/kg (parts per million) sulphur dioxide and sodium and potassium sulphites.

Other permitted food additives

The Code places limits on the amount of other food additives that can be in breads and bakery products, such as propionic acid.

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

Requirement to use iodised salt

Standard 2.1.1 of the Code requires iodised salt to be used in almost all bread and bread products. There are some exceptions to this including:

- organic bread;
- salt on the surface of bread, for example rock salt;
- other ingredients containing salt that are added to bread;
- bread not intended for sale in New Zealand or Australia.

MPI has developed a user guide to help bakers interpret and apply the requirements. It also contains information for bakers who want to add folic acid to bread at:

http://foodsafety.govt.nz/elibrary/industry/Addition_Folic-Manufacturers_Retailers.pdf (112 KB PDF)

Adding Vitamins and Minerals

The Code Standard 1.3.2 permits vitamins and minerals to be added to biscuits and bread and prescribes the total of naturally occurring and added quantity that can be present in a reference quantity of product.

For example, no more than 0.55 mg of thiamin may be present in a 50 g sample of bread. (this represents 50% of the recommended daily intake of thiamine)

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Limits for harmful microbes

Levels of harmful microbes in bakery products

The Code Standard 1.6.1 sets maximum permissible levels of harmful organisms that may be present in certain foods from a minimum of five sample units from one lot of the product.

Standard 1.6.1 doesn't list any bakery products; however some bakery products can support the presence of harmful organisms, particularly when containing dairy products such as cream or custard. Guidelines for the microbiological examination of ready - to - eat (RTE) foods published by Food Standards Australia New Zealand provide assistance in the interpretation of microbiological analyses of foods where no other microbiological criteria exist: <http://www.foodstandards.gov.au/publications/documents/Guidelines%20for%20Micro%20exam.pdf>

The following table provides examples of guideline levels for harmful organisms of significance for bakery products. Microbiological quality is expressed in Colony forming Units (CFU) per gram:

Test	Satisfactory	Marginal	Unsatisfactory	Potentially hazardous
E. coli	<3	3-100	>= 100	Pathogenic strains present
Coagulase +ve staphylococci	<100	100 -1000	1000 – 10000	>=10000
SET +ve				
B. cereus	<100	100 -1000	1000 – 10000	>=10000
Salmonella spp	Not detected in 25g			Detected

Herbs, Spices and Premixes

Herbs and spices such as capsicums, cinnamon and pepper can contain harmful organisms.

Guidance on microbiological levels for harmful organisms that may be found in herbs and spices is at: http://www.foodsafety.govt.nz/elibrary/industry/Microbiological_Reference-Guide_Assess.pdf. For example, in five samples taken from a lot there should be no Salmonella in 25g

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Composition

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

Composition of bakery products

The Code Chapter 2 includes definitions, compositional and labelling requirements for a range of products, including:

- Iodised salt must be used for making bread where salt would otherwise be used;
- A pie must contain at least 250 g/kg of meat flesh to be called a meat pie;
- The presence of brain, heart, kidney, liver, tongue or tripe in a food must be declared either by its specific name (e.g. “liver”, “kidney”) or by the class name “offal”;
- The presence of other offal in a food (i.e. blood, pancreas, spleen, thymus) must be declared by its specific name (e.g. “thymus”);
- It is important to note that in either case above, even if a product containing offal is exempt from being fully labelled, the purchaser must be informed proactively, either verbally or in writing;
- To be called a sausage, the product must contain at least 500g/kg of fat free meat flesh. The proportion of fat in a sausage must be no more than 500g/kg of the fat free meat content;
- To call a product “jam” – e.g. a “jam doughnut” – each kilo of the jam must be made from no less than 400 grams of the fruit or fruits named and contain no less than 650 g/kg of water-soluble solids;
- To call a product “cream” – e.g. a “cream puff” – the cream must contain no less than 350g/kg of milk fat.

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