

# Cooking

Good Hygiene Practice  
Guide No 9

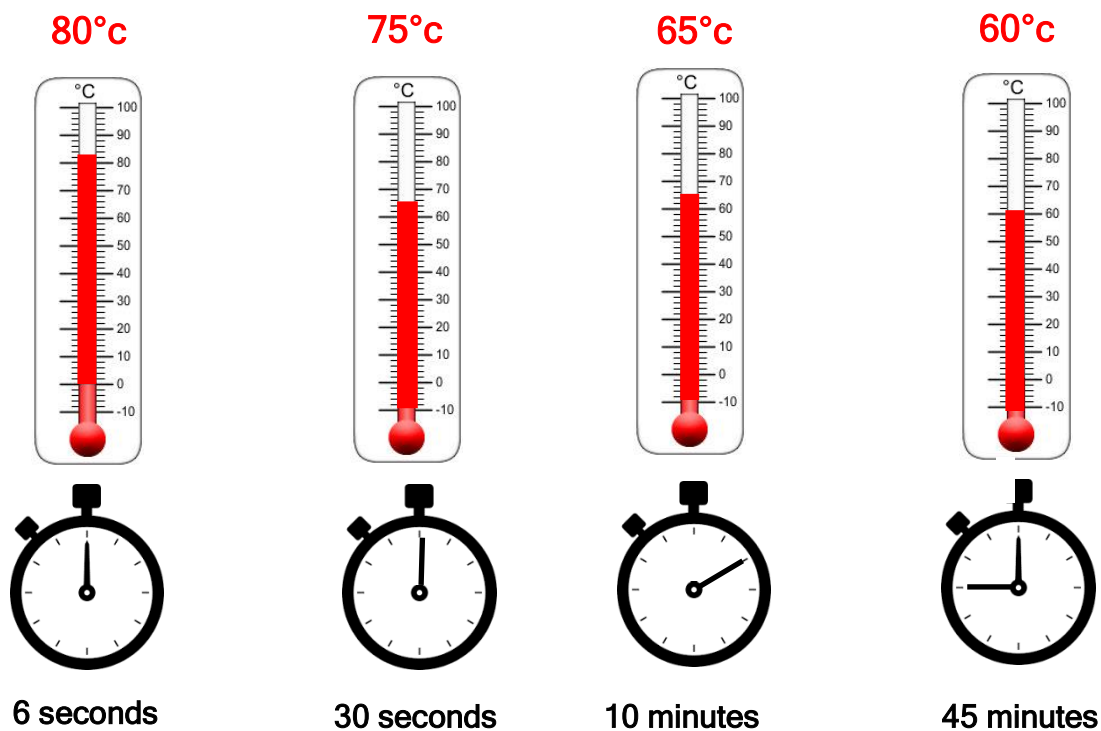
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## Food Safety Hazards

Cooking is a critical step to ensure that any bacteria in food are completely killed making the food safe to eat. It is essential that the cook step is carried out correctly.

Food poisoning microorganisms are killed by exposing them to a sufficiently high temperature for a sufficiently long time. Correct **Time** and **Temperature** combinations ensure that any microorganisms at centre of the food are subjected to conditions that kill them. The higher the temperature, the shorter the time required to kill harmful microorganisms:



## Cooking – General Guidance

Ensure the following guidance is applied whenever cooking food:

- Cook all food thoroughly to kill food poisoning bacteria
- Always follow manufacturers cooking recommendations where applicable
- Never undercook rolled, minced, diced beef or lamb
- Protect food from any risk of contamination during cooking by covering it where possible.
- Always use a probe thermometer to check the final cooking temperatures, except where visual checks alone are appropriate, e.g. bacon, pizza, eggs.
- Sanitise the probe before and after use
- Record all cooking temperatures accurately in the **Food Production Temperature Record** form
- If you believe that the safety of a food item has been compromised at any stage of the cooking process notify your line manager / head chef and dispose of the food.



## Cooking - Temperature Control

### Compass Rules:

- Cook food thoroughly to achieve a core temperature of +75°C for at least 30 seconds.
- Exemption: Whole cuts of meat (beef, venison or lamb) required “rare” and some fish products may be cooked to a lower temperature.
- Temperature check all protein foods using a sanitised probe thermometer to verify completion of the cooking process.
- Food cooked to order for immediate consumption must be periodically checked to ensure the cooking procedure achieves the correct core temperature. It is not necessary to check every item.
- Check and record the temperature of several items in a batch and of several batches where batch cooking is employed.

## Cooking – Visual Checks

There are certain foods that require visual checks before, during and after cooking, sometimes in addition to temperature monitoring or on its own. Visual checks can also help prevent or identify physical contamination.

### 1. Whole Cuts of Red Meat or Red Meat Joints (beef, venison or lamb)

- Where whole cuts of meats are required “pink” or “rare” and are cooked to a lower core temperature, they do not need to be probed. Instead, ensure the outer surface of the meat is fully sealed and browned off before serving.
- Note that the food was cooked to rare in the comments column in the **Food Production Record** form.
- Pork and rolled joints **must not** be served rare



### 2. Pork and all types of Rolled Joints

- To check a pork joint or rolled meat joint, insert a skewer into the centre and check the colour of juices that run out.
- The juices should not have any red or pink in them.
- For rolled joints this is to ensure that any bacteria that may have been transferred to the centre of the rolled joint have been killed.
- Regular temperature monitoring is required in addition to visual checks.



### 3. Poultry (chicken, duck, goose etc.)

- Check that poultry is cooked properly in the thickest part, such as the leg of a whole chicken.
- The meat should not be pink or red and the juices should not have any red or pink in them.
- Regular temperature monitoring is required in addition to visual checks.





### 6. Minced Meat (e.g. burgers, sausages, sausage rolls)

- Check that food items are thoroughly cooked and piping hot all the way through with no red or pink in the centre.
- This is to ensure that any bacteria spread throughout the minced meat have been killed.



### 4. Combination Dishes (e.g. shepherd's pie / lasagne)

- Check the dish is piping hot (steaming) in the centre.
- If you are cooking a large dish or batch, check in several places.
- Remember large dishes or batches require a longer cooking time.
- Always use a probe to check core cooking temperature.



### 5. Liquids & Soups

- Stir liquid dishes frequently to help make sure the food is the same temperature all the way through, and to prevent cold spots from forming.
- Check that liquid dishes bubble rapidly when you stir them.



### 7. Fish

- Check the centre of fish, or near the bone if there is one. The colour should be opaque and the texture flaky.
- Exception: Whole pieces of fish (e.g. tuna steaks) can be served 'rare' as long as they have been fully seared on the outside.



### 8. Shellfish (e.g. mussels, prawns, scallops)

- Shellfish such as prawns and scallops change in colour turning from blue-grey to pink, when they are cooked.
- Scallops become milky white and firm when cooked.
- To check mussels or clams are cooked, make sure the shell is open. Discard any mussels where the shell has not opened during cooking.



### 9. Bacon

- Check that the texture and colour have changed.
- Temperature checks are not required.



### 9. Pizzas

- Check that the base is cooked and the toppings bubbling.
- Temperature checks are not required.





## Cooking – Eggs & Egg Products

Some eggs can contain food poisoning bacteria, and thorough cooking makes sure these bacteria are killed. Do not serve 'soft' eggs to vulnerable groups, such as young children, the sick, pregnant women, or the elderly.

### Compass Rules:

- Only purchase Lion Quality Assured hens' eggs within the UK from Compass authorised suppliers.
- Ensure that whole eggs are used by the 'best before' date marked on the shell.
- Dispose of broken eggs and eggshells immediately.
- Always wash hands after handling raw eggs.
- Prepare raw egg mixtures as close to service as possible and keep them under refrigeration until use.
- Pasteurised egg products must be used in dishes that are not cooked at all or are only lightly cooked. This includes mousses, béarnaise sauce, hollandaise sauce, soft meringues, soufflés, lightly cooked scrambled eggs, mayonnaise and other salad dressings, ice cream, icing, tiramisu etc.
- When preparing fried, poached or boiled eggs for service from a bain marie or a hot cabinet they must be thoroughly cooked until the yolk and white are solid, regardless of the consumer group.
- If a customer requests a 'soft egg', cook the egg to order and serve immediately.

## Cooking – Microwaves

### Compass Guidance:

Microwave ovens operate differently to conventional ovens and, although a useful piece of equipment, they must be used correctly to ensure that food safety standards are met:

- Only use commercial grade microwave ovens. Domestic microwave ovens are not as durable, and their power output reduces over time and with continual use.
- Follow the manufacturer's instructions (including standing times) for heating/cooking foods. You will need to know the power rating (Watts) of the microwave.
- Only heat/cook small quantities in the microwave. Overloading significantly increases the time to fully heat/cook foods.
- Use suitable containers such as round, shallow dishes of microwave proof material including lightweight ceramics or plastics designed for microwave use.
- If foods are heated/cooked in the original packaging, pierce the pack or the film to avoid build-up of condensate or steam.
- Avoid wrapping food (particularly fatty goods / oily foods) in any form of cling film whereby the cling film is in direct contact with the food as this could cause migration of plastic materials from the cling film into the food
- If heating/cooking foods in a lidded container, open it slightly to allow steam to escape.
- Stir liquid items during and at the end of the heating/cooking cycle.
- Where appropriate, always check temperatures of the food to ensure that a temperature of +75°C has been achieved in all parts of the product.
- Do not use microwave ovens for defrosting foods, unless they are going to be cooked immediately after defrosting. Microwave ovens will cook thawing foods on the outside before the centre is defrosted. See **GHP No 8: Defrosting** for further details.





### Checks – Food Production Temperature Record

The Food Production Temperature Record must be completed to demonstrate that:

- Correct core temperatures for cooked and reheated foods have been achieved.
- Correct cooling times and temperatures have been adhered to.

#### Compass Rules:

- Cooking temperatures for all protein foods and reheating temperatures for all protein foods and rice dishes must be accurately monitored and recorded. Temperature records are not required for eggs, fish, shellfish and bacon.
- Where large quantities are being prepared, check and record the temperature of several batches.

#### Completing the Food Production Temperature Record form:

- 1 • Record the date and time of the check
- 2 • Record the specific food item or dish you are temperature checking. Identify by batch if recording more than one.
- 3 • Record the temperature of the food item. Wait until the thermometer reading has stabilised and write the exact temperature to one decimal point.
- 4 • Ensure each temperature reading is initialled.
- 5 • Record any reasons for temperatures that are below +75°C, such as specific customer cooking requests, in the comments column.
- 6 • When re-heating food record the temperature in the re-heating column of the form.
- 7 • Ensure each daily Food Production Temperature Record form is reviewed and signed off by a manager at the end of the day / shift.

COMPASS GROUP UK & IRELAND – FOOD PRODUCTION TEMPERATURE RECORD

Unit Name: **High Street Bank Ltd** Unit No: **01234**

DATE	FOOD ITEM	COOKING +75°C			COOLING Fast chilling: Continue chilling to 5°C from temperature cooling. Maximum cooling is 30 minutes then transfer to refrigeration.			RE-HEATING +75°C (re-heating in Scotland).			COMMENTS If food is not to be reheated record how used and date served, e.g. salad bar, cold left, sandwich filling. If food has been frozen or chilled in the unit, record the original date of production here.		
		Time	Temp	Init	Start Time	Finish Time	End Temp	Init	Date	Temp		Init	
10.09.18	Roast Chicken	11.00	83°C	JK	✓	11.10	12.20	4°C	JK				
10.09.18	Spag Bol sauce	11.45	83°C	JK									
10.09.18	Beef Pie	11.50	89°C	JK									
10.09.18	Errow									10.09.18	94°C	DS	made and frozen on 1/9/18
11.09.18	Turkey Pie	11.50	83°C	JK									
11.09.18	Cod	11.30	92°C	JK									
11.09.18	Roast beef	2.00pm	80°C	JK	✓	2.10pm	3.40pm	5°C	JK	12.09.18	86°C	JK	
11.09.18	Chicken portions	11.50	79°C	JK									
11.09.18	Errow	11.50	85°C	JK									
12.09.18	Beef stew	12.00	77°C	JK									
12.09.18	Shank Scallops	12.00	79°C	JK									
12.09.18	Veig Lorraine	11.40	77°C	JK									
12.09.18	Errow	11.50	92°C	DS									
12.09.18	Turd Bake	1.30pm	82°C	JK		1.30pm	3.00pm	27°C	JK	12.09.18	86°C	JK	cooked and chilled on 11/9/18
12.09.18	Roast Beef												

COOKING: +75°C. Record time and temperature on completion of cooking. Cooling: Max 90 minutes or blast chill to 5°C. Record start and finish time. Record temperature at finish time.  
 Re-heating: +75°C (re-heating, Scotland). Record time completed. Sign off after each process completed in the initial column.  
 Whole cuts of meat required 'rare' and some fish dishes may be cooked to a lower temperature. Record this in the comments column.  
 Never undercook chicken, turkey or rolled, minced, diced meat.

CHECKED BY: **Diane Smith** DATE: **14.09.18**  
 Manager to check the record form and sign before filling record. Retain for 6 months



## Checks – Using A Probe Thermometer

### How to Use:

- Ensure all probe thermometers are labelled to clearly distinguish between those used for delivery and those used for cooking tasks.
- Always sanitise the probe with a probe wipe, or sanitiser and blue roll, before inserting into any food.
- To check the temperature of a food item, insert the tip of the sanitised probe thermometer into the centre of the food item.
- Always ensure you probe the thickest part of a piece of meat or a meat product, such as a sausage roll.
- Where the food item is composed of liquid and protein for example chicken curry or beef stew, the probe tip must be inserted into the centre of the protein item.
- The probe tip must not touch the heat source as this will give a false reading.
- Allow the probe reading to stabilise.
- Record the temperature to one decimal place.
- Remove the probe thermometer and clean and sanitise it.



## Probe Thermometer Accuracy Checking

Temperature monitoring must be carried out using an accurate thermometer. Thermometers may lose their precision over a period of time and it is therefore important that thermometer accuracy is checked monthly to ensure that the thermometer readings are correct.

- Accuracy check all probe thermometers monthly.
- Record checks and any corrective actions on **Probe Thermometer Accuracy Record** form.
- Test accuracy of probe thermometer to either cold (0°C) or hot (100°C) depending upon availability of test method within unit

### Hot

- Bring a pan of unsalted water to the boil
- Place probe carefully into boiling water
- Stir probe until steady reading is achieved
- Ensure probe does not touch bottom of pan
- Check display is between +99°C and 100°C
- Only variance of 0.5°C in Ireland
- If outside this range replace thermometer

### Cold

- Fill a jug with ice and top up with cold water
- Place the probe into the iced water
- Stir probe until a steady reading is achieved
- Check display is between -1°C and +1°C
- Only variance of 0.5°C in Ireland
- If outside this range replace thermometer

Some catering units may have a type of electronic probe thermometer that can be tested for accuracy by using calibration caps from the supplier. Always follow the instructions supplied with the electronic probe thermometer.



## Acrylamide

### Background:

Acrylamide is a chemical substance formed by the reaction between amino acids and sugars when certain high starch foods such as potatoes and bread are cooked at high temperatures (over 120°C) in a process of frying, toasting, roasting or baking.

There is some evidence that high levels of acrylamide can result in increased risk of developing cancer.

The choice of ingredients, storage of ingredients and the temperature at which foods are cooked can influence the amount of acrylamide foods have.

### Definitions:

Acrylamide is linked to the frying, roasting, toasting or baking process of the following food types:

- French fries, chips, roast potatoes and other deep-fried potato products such as potato crisps made from fresh potatoes;
- Potato crisps, vegetable crisps, crackers etc;
- Roasted root vegetables such as parsnips, carrots and sweet potatoes
- Toast;
- Breakfast cereals, such as cornflakes and bran flakes;
- Coffee
- Cookies, biscuits, rusks, cereal bars, gingerbread, as well as crackers, crisp breads and bread substitutes.

### Compass Guidance:

To reduce the amount of acrylamide in food the following principles should be adopted:

- Do not store potatoes in the fridge as this increases the sugar content, which can result in higher acrylamide levels.
- Soak potatoes that are going to be deep-fried in cold water for 30 minutes or in warm water for a few minutes, then rinse and drain.
- Go for gold - aim for a golden colour and make sure not to overcook starchy foods. The darker the colour the higher the acrylamide levels will be.
- Always follow the manufacturers recommended cooking method and timings.
- When frying, set the temperature as low as possible - ideally below 175°C.
- Skim off debris from fryer oil, as this will burn and increase acrylamide levels.
- Filter/change frying oil regularly and keep fryers clean.
- Do not over fill frying baskets or oven trays; this allows food to cook evenly.
- Use a lower oven temperature for bakery products and extend the cooking times to allow products to be baked to a lighter colour.
- Turn food products regularly during the cooking process to avoid burning.
- When cooking smaller quantities reduce the cooking time to avoid overcooking.
- Discard any overcooked / brown / burnt product and do not serve.







## Additional Guidance

1. Cross Contamination
  - Refer to **Good Hygiene Practice Guide No: 4 - Cross Contamination** for guidance on how to minimise cross contamination risks
2. Personal Hygiene
  - Refer to **Good Hygiene Practice Guide No: 2 - Personal Hygiene** for guidance on good personal hygiene practices / uniform & PPE / food handlers return to work following illness
3. Equipment Maintenance
  - Refer to **Good Hygiene Practice Guide No 14 - Food Premises** for guidance regarding catering equipment service and maintenance
4. Acrylamide
  - Refer to UK Hospitality (UKH) Industry Guide to Acrylamide: Catering & Food Service