TIME & TEMPERATURE CHART

RECOMMENDED DONENESS TEMPERATURES

PROTEIN	DONENESS	TEMPERATURE (°C)
Beef, Veal, Lamb	Rare	50
	Medium Rare	56
	Medium	60
	Medium Well	65
	Well Done	70 and over
Pork	Medium Rare	56
	Medium	60
	Well Done	70 and over
Poultry – White meat	Medium	60
	Well Done	75 and over
Dark meat	Medium	70
	Well Done	80 and over
Duck (only)	Medium Rare	56
Fish, Crustaceans	Rare (sashimi grade)	42
	Medium Rare	52
	Medium	60
Vegetable/Fruits	—	85

⚠ *CAUTION*

Rare or unpasteurised foods should not be consumed by immune compromised or highly susceptible people including very young children, the elderly and pregnant woman. Food Standards recommend that for safety, food should not be consumed if it has been kept between 5 °C and 55 °C for longer than 4 hours.

⚠ *NOTE*

Thickness measurements are based on the thickest section of the food and measured through the vacuum sealed pouch. Cooking times are for foods starting at refrigerator temperaures.

RECOMMENDED COOKING TEMPERATURE & TIMES

FOOD	THICKNESS (cm)	TEMP (°C)	TIME (MIN)	TIME (MAX)
BEEF, VEAL, LAMB, GAME				
TENDER CUTS				
Tenderloin, Eye Fillet	6cm	56 or higher	2 hrs	4 hrs
Sirloin, Scotch Fillet, T/Bone	3cm	56 or higher	2 hrs	6 hrs
Wagyu Rump	10cm	56 or higher	4 hrs	8 hrs
Lamb Cutlets, Backstrap	3cm	56 or higher	1 hr	4 hrs
TOUGH CUTS				
Lamb Shanks, Shoulder		60 or higher	8 hrs	24 hrs
Beef Cheeks, Gravy Beef, Chuck		60 or higher	10 hrs	48 hrs
Flank Steak, Brisket	3cm	56 or higher	4 hrs	12 hrs
Spare Ribs		60 or higher	10 hrs	48 hrs
PORK				
TENDER CUTS				
Fillet, Tenderloin	5cm	56 or higher	2 hrs	4 hrs
Cutlets, Chops (Bone In)	5cm	56 or higher	3 hrs	5 hrs
TOUGH CUTS				
Pork Belly		60 or higher	6 hrs	24 hrs
Pork Neck, Shoulder		60 or higher	6 hrs	24 hrs
Babyback Ribs		60 or higher		
POULTRY				
WHITE MEAT				
Chicken Breast - Boneless		60 or higher	2 hr	4 hrs
Chicken Breast - Bone In		60 or higher	3 hrs	6 hrs
Turkey Breast	7cm	60 or higher	3 hrs	6 hrs
DARK MEAT				
Chicken Thigh - Boneless	3cm	70 or higher	1 hr	4 hrs
Chicken Maryland		70 or higher	4 hrs	8 hrs
Duck Breast	3cm	56 or higher	3 hrs	8 hrs
Traditional Duck Confit		80	8 hrs	18 hrs
EGGS (IN SHELL) 70G				
Soft Poached (Slow)		63	45 min	1.5 hrs
Soft Poached (Fast)		75	15 min	18 min
Hard Cooked		71	45 min	1.5 hrs
Pasteurised		57	1.25 hrs	2 hrs
SEAFOOD				
WHITE FLESH FISH				
Kingfish, Trevalla, Dory, Snapper, Barramundi	3cm	42 or higher	20 min	40 min
OILY FISH				
Atlantic Salmon, Ocean Trout (Sashimi Grade) Salmon, Trout, Mackerel	3cm	42 or higher	20 min	40 min
CRUSTACEANS/MOLLUSCS				
Prawns		60	30 min	60 min
Scallops		60	40–60 min	60 min
Squid, Octopus		50	10 min	60 min
VEGETABLE & FRUIT				
TENDER VEGETABLES				
Asparagus, Broccoli, Fennel, Cauliflower, Peas, Green Beans, Onion, Squash	5cm	85	30 min	1.5 hrs
ROOT VEGETABLES				
Beets, Carrots, Potato, Parsnips, Turnips, (Corn)	5cm	85	1 hr	2 hrs
FRUIT		85		
Apple, Pear, Strawberry	5cm	85	30 min	1 hr

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FOOD SAFETY & SOUS VIDE COOKING

Is cooking at low temperature safe?

Reducing the risk of food-borne illness by cooking foods depends not only on the temperature, but also on the time. The lower the temperature, the longer the time. Salmonella is a common type of food-borne bacteria, it will be killed in 10 minutes at 65°C but will take 2 minutes to do so at 70°C.

Almost all potentially harmful organisms will be killed at 55°C given sufficient time to heat the food completely to that temperature. Since most sous vide cooking is done between 56°C and 85°C, the food will be safe. The most common exception is fish, which some people prefer to eat rare or medium rare (40°C–50°C). In this case, it is important to only buy fish that is safe to eat raw—in other words, sushi grade ocean fish.

⚠ *FOOD SAFETY CAUTION*

People who are immune compromised for any reason or are in a susceptible group including very young children, the elderly and pregnant woman and should never consume raw, rare or unpasteurized foods. People in this category should only consume sous vide foods that have been cooked at or above 60°C for a sufficient amount of time to ensure the food is fully pasteurised.

How do I minimise the risk of food-borne illness when cooking sous vide?

When handling food, whether cooking sous vide or using more traditional techniques, all cooks should familiarise themselves with basic food safety practices:

- Food for sous vide cooking must be fresh, high quality and thoroughly cleaned.
- Do **NOT** cross contaminate – use separate cutting utensils and storage units for different foods such as vegetables, fish, poultry and meat.
- Ensure pouches are properly vacuum sealed, and not compromised before, during and after cooking.
- Properly cook all foods according to cooking chart (reverse side) or recipe. Select the correct temperatures and cooking time for the food type and thickness.
- Serve foods right away or follow proper storage and chilling practices.
- Cooked foods must be cooled to 20°C within 2 hours and then cooled to 5°C within 4 hours.
- Consume cooked and chilled sous vide foods within 48 hours.

⚠ *TIPS*

For additional food safety and handling tips, we recommend visiting an approved food safety site such as the Food Standards Agency www.food.gov.uk or consulting 'Making it Safe - A Guide to Food Safety by the CSIRO division of Food and Nutritional Sciences'.

How long can sous vide cooked foods be kept in the refrigerator safely?

Food cooked sous vide can be safely kept in the refrigerator for up to 48 hours. To be kept longer, the food should be quick chilled in its pouch and can then be frozen for up to 3 months.

How do you safely chill sous vide cooked foods?

To safely refrigerate or freeze food cooked sous vide and not intended for immediate consumption, it should be quick chilled in its cooking pouch, completely submerged in an ice water bath to allow the temperature to drop quickly through the danger zone (4°C to 55°C). How long the food should stay submerged in the ice water should mirror the minimum cooking time for that food, in most cases 30 minutes to 1 hour. The ice water bath should contain enough ice to bring the water temperature close to 0°C. Half ice and half water is usually sufficient, adding more ice over time if needed.

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