



TIME/TEMPERATURE CONTROL

Pathogen reduction involves a time-temperature relationship. The following minimum guidelines should be adhered to. Other time-temperature regimens might be suitable, if it can be demonstrated with scientific data, that the regimen results in a safe food.

Critical Step	Temperature Requirement		
Refrigeration	4°C or less		
Freezing	minus 18°C or less		
Parasite Reduction:			
Raw fish (sushi and related products)	minus 20°C for 7 days in a freezer or, frozen at minus 35°C for 15 hours		
Cooking:			
Food Mixtures containing poultry, eggs, meat, fish, or other potentially hazardous foods	Internal temperature of 74°C for at least 15 seconds		
Pork, Lamb, Veal, Beef (whole cuts)	Oven Type	Oven Temperature based on weight:	
		less than 4.5 kg.	4.5 kg. or more
	Still dry	177°C or more	121°C or more
	Convection	163°C or more	121°C or more
	High Humidity	121°C or less	121°C or less
Rare Roast Beef	Internal temperature of 63°C for 4 minutes		
Poultry	Internal temperature of 74°C for 15 seconds		
Stuffing in, or containing poultry, fish or meat	74°C for 15 seconds		
Ground Meat (includes chopped, ground, flaked or minced beef, pork, or fish)	71°C for 15 seconds		
Eggs	63°C for 15 seconds		
Fish	68°C for 15 seconds		
Reheating	74°C for 15 seconds		
Holding Hot Foods	60° C or more		
Cooling	60°C to 20°C within 2 hours 20°C to 4°C within 4 hours		

COOLING

When cooling, it is important to move the food through the danger zone (4°C to 60°C) quickly. Hot foods that are not going to be immediately served or held in hot-holding units should be rapidly cooled for cold storage. Rapid cooling can be achieved by using one or more of the following methods based on the type of food being cooled:

1. cooling in a refrigerator that is less than 4°C and has adequate air circulation
2. placing foods in shallow pans
3. separating foods into smaller or thinner portions
4. using rapid cooling equipment
5. stirring foods frequently
6. placing foods in an ice water bath
7. using containers that facilitate heat transfer (i.e. metal, rather than plastic)
8. adding ice as an ingredient

REHEATING

Potentially hazardous foods that have been cooked then cooled to 4°C shall be reheated as quickly as possible to a minimum temperature of 74°C. Once reheated, foods shall be hot-held at no less than 60°C. Always reheat foods on a stove or in an oven. Do not reheat foods in a hot-holding unit or in a chaffing dish.

THAWING

Foods are NEVER to be thawed at room temperature. Ensure perishable foods are thawed by one of the following approved methods:

1. Under refrigeration, maintaining food temperatures below 4°C.
2. Completely submerged under running water at a temperature of below 4°C, with sufficient water velocity to agitate and float off loose particles in an overflow.

**** FOR MORE DETAILED INFORMATION ABOUT COOKING, COOLING, REHEATING AND THAWING, PLEASE REFER TO THE FOOD CODE****

<http://www.health.gov.ab.ca/professionals/foodcode.html>