

Cooling Methods

Rapid Cooling = Safe Food



Time and temperature control for safety food shall be cooled within 2 hours from 135°F to 70°F, and within a total of 6 hours from 135°F to 41°F or less.

Factors that Speed the Cooling of Foods

- **Container type and size:**
 - Move food to shallow metal pans. Glass and plastic are insulators so food cools more slowly.
- **Volume:**
 - Reduce large quantities into smaller amounts. Small batches in shallow metal pans cool the fastest.
- **Stirring:**
 - Speed cooling by stirring. Stir foods every 15 minutes to 30 minutes.
- **Air circulation:**
 - To cool food fast, chill it partially uncovered then cover once the food is 41°F. Stacked pans block air circulation and hold heat. Use wire racks and spread pans of food out. Be sure not to block the refrigeration unit fans.
- **Adding ice or water:**
 - Add ice or cool water as an ingredient to food to cool it faster.
 - Put food container in an ice-water bath.
 - Use chill wands to cool the food quickly.

Monitor the Speed of Cooling

Monitor cooling temperatures with a thermometer. It is recommended to document the process by using a Cooling Log.

Corrective Action

- If you fail to meet any of the time/temperature parameters for cooling, the food must be thrown away.
- During the first cooling stage (135°F to 70°F), if you know your product will not cool in 2 hours but it hasn't passed the 2 hour time limit, you may reheat it to 165°F one time and attempt the cooling process again. Add ice or cool water as an ingredient.

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Food Cooling Log

- Cooked TCS food must be cooled from 135°F to 41°F or below within 6 hours. The decrease in temperature from 135°F to 70°F must occur within 2 hours.
- If the temperature is more than 70°F in 2 hours, food may be reheated once to 165°F and cooling can start over.
- Total cooling time cannot exceed 6 hours or food must be discarded.

Table 1: Food Cooling Log Template with an Example.

Date	Food	Start Time/Temp	Temp at 1 hour	Temp at 2 hours	135°F to 70°F in 2 hours?	Temp at 3 hours	Temp at 4 hours	Temp at 5 hours	Temp at 6 hours	135°F to 41°F in 6 hours?	Corrective Action	Initials
1/1/2020	Beef stew	10 AM 135°F	100°F	69°F	If yes, continue. If no, reheat.	60°F	50°F	45°F	39°F	If yes, food is safe to use. If no, dispose of food.	No	ZZ

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