

## Guidelines on Cooling and Reheating Food

### Objective:

The temperature of food in the process of cooling and reheating inevitably passes through the temperature danger zone (5°C to 60°C). If the temperature of cooling and reheating is not properly controlled or the process takes too long, potential pathogenic microorganisms in food rapidly multiply or produce toxins, thereby increasing food safety risks. These guidelines are intended to remind the food industry about the food hygiene and safety issues they should pay attention during the process of cooling and reheating food, so as to reduce the risk of foodborne disease outbreaks and ensure food safety.

### Scope of Applicability:

Establishments of food production and operation which need to cool or reheat food in food handling process.

### Definitions:

1. Cooling: A food handling process in which proper cooling methods are used to rapidly reduce the temperature of hot food to the temperature suitable for storage in the refrigerator.
2. Reheating: A food handling process in which refrigerated cooked food or frozen cooked food that has been completely defrosted is fully reheated.

### Content:

#### 1. Cooling of food

##### 1) Time control in cooling of food:

- Adopt fast cooling methods to shorten the cooling time;
- Limit the entire cooling process to less than 6 hours. Cool food from 60°C to 21°C in the first 2 hours or less, and from 21°C to below 5°C in the following 4 hours or less;
- After the food is cooled, store it in the refrigerator as soon as possible, and make sure there is adequate space between food items

for cold air to circulate in the refrigerator.

2) Methods to cool food quickly:

- Use containers with good thermal conductivity (such as stainless steel) to hold hot food to facilitate heat dissipation;
- Divide hot food into smaller portions or/and place it in shallow containers, and cut large joints of meat into smaller chunks;
- Put the container holding hot food into a larger container, and put clean ice cubes and water in the large container to cool the food quickly; make sure the water level does not exceed the edge of the container holding the hot food to prevent the ice water from contaminating the cooked food;
- Stir the food occasionally during the cooling process;
- Put hot food in a blast chiller to cool it rapidly.

2. Reheating of food

- Refrigerated cooked food or frozen cooked food that has been completely defrosted should be reheated as quickly as possible to a core temperature of 75°C or above for at least 15 seconds;
- Shorten the reheating time as far as possible, and limit the entire reheating process to less than 2 hours;
- Reduce the portion of food or stir the food occasionally during the reheating process to shorten the reheating time;
- If the reheated food is not served immediately, store it in an insulated cabinet or bain-marie (water bath) to keep the temperature of the cooked food above 60°C;
- Cooked food can only be reheated once. If the food is not finished after reheating, discard it.

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