

# CHAPTER 8

## THE SAFE FLOW OF FOOD



**CULINARY ARTS AND RESTAURANT MANAGEMENT – CHEF OLSZEWSKI**

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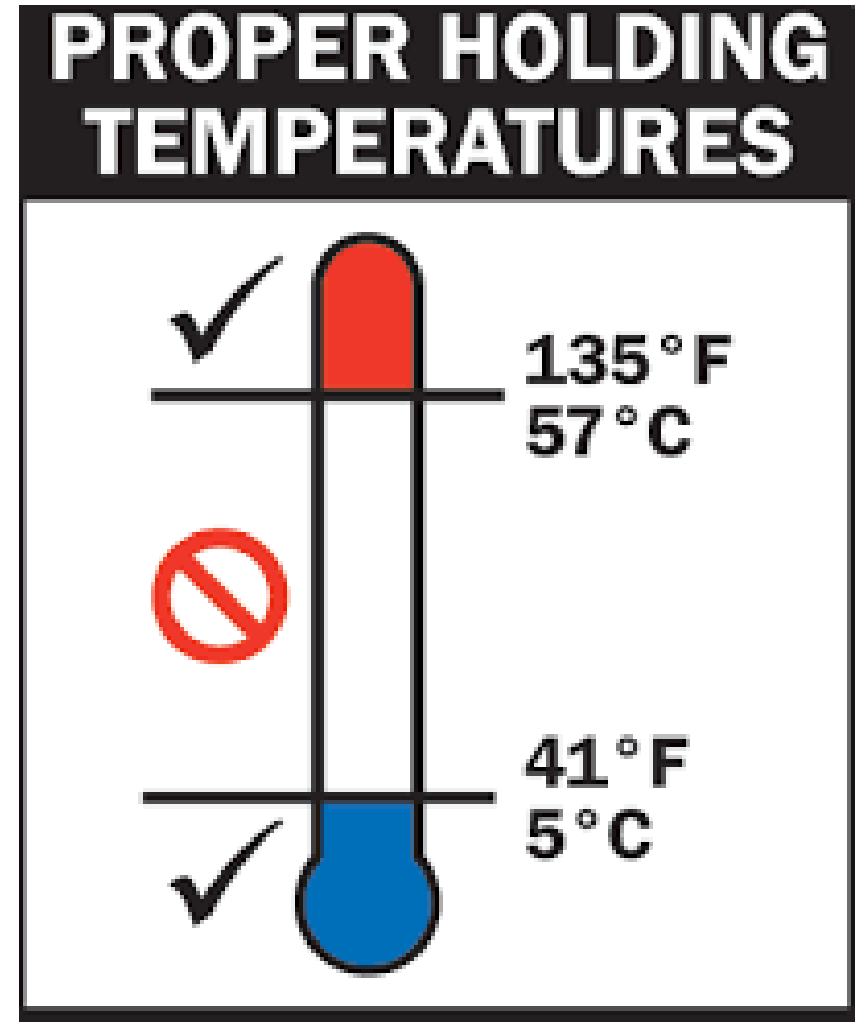
## CROSS-CONTAMINATION

- PATHOGENS SPREAD FROM ONE SURFACE TO ANOTHER
- SEPARATE RAW FOOD AND READY-TO-EAT FOOD
- CLEAN AND SANITIZE ALL SURFACES
- PREP FOOD AT DIFFERENT TIMES
- STORE CHEMICALS SEPARATELY



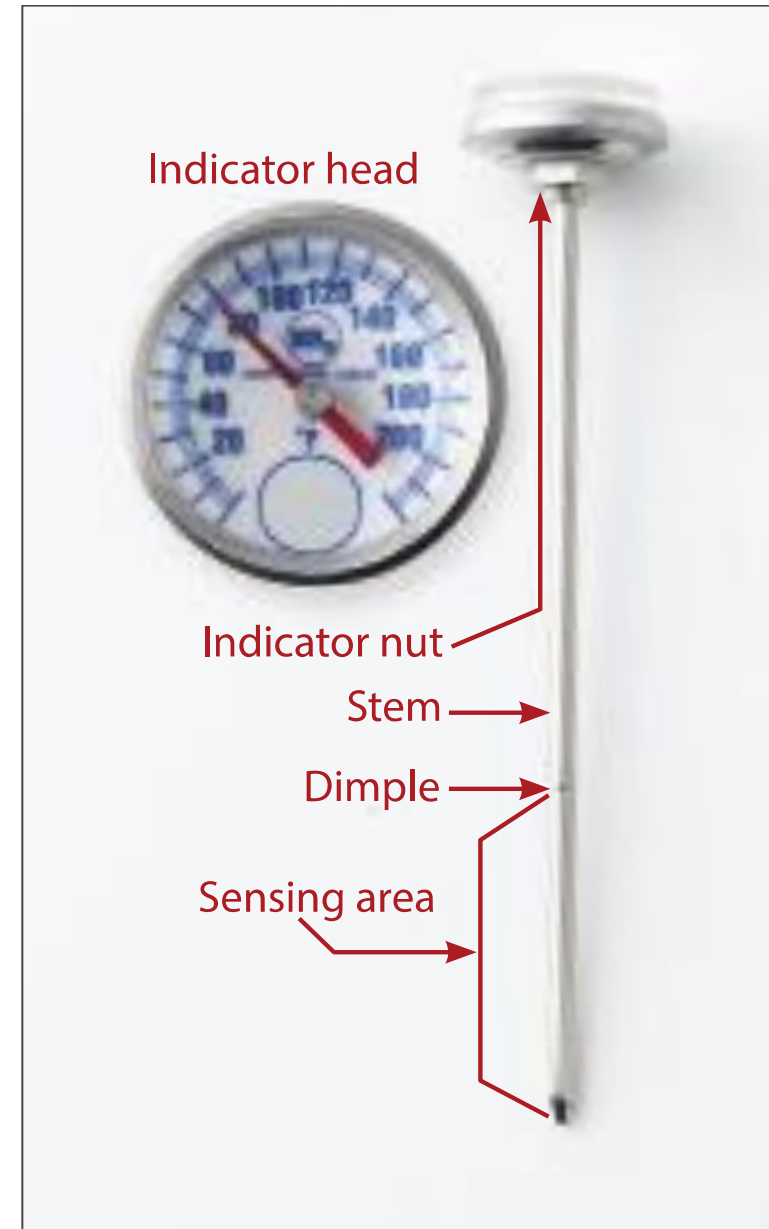
## TIME-TEMPERATURE ABUSE

- **FOOD IN TEMPERATURE DANGER ZONE TOO LONG**
- 41°F TO 135°F (5°C TO 57°C)
  - **PATHOGENS GROW BEST IN:**
- 70°F TO 125°F (21°C TO 52°C)
- **REASONS FOR TIME TEMPERATURE ABUSE:**
- IN TDZ LONGER THAN 4 HOURS—THROW OUT
- COOKED TO WRONG INTERNAL TEMPERATURE
- HELD AT WRONG TEMPERATURE
- COOLED OR REHEATED INCORRECTLY



## THERMOMETERS

- BIMETALLIC STEMMED THERMOMETER
- 0°F TO 220°F (-18°C TO 104°C)
- USED FOR HOT AND COLD FOOD
- INSERT STEM TO DIMPLE
- **SENSING AREA** — TIP TO DIMPLE
- LARGE OR THICK FOOD, THICKEST PART
- USUALLY CENTER, WAIT 15 SECONDS
- TAKE TWO READINGS FOR ACCURACY



## HOW TO CALIBRATE THERMOMETERS

- **HOW THERMOMETERS LOSE ACCURACY**
  - BUMPED OR DROPPED
  - SEVERE TEMPERATURE CHANGES
- CALIBRATE OR ADJUST MANUALLY

### **TWO WAYS TO CALIBRATE:**

- ICE-POINT METHOD – 32F
- BOILING-POINT METHOD – 212F





## TAKING TEMPERATURES

### RECEIVING TEMPERATURES:

- COLD TCS FOOD—41°F (5°C) OR LOWER
- HOT TCS FOOD—135°F (57°C) OR HIGHER
- FROZEN FOOD—FROZEN SOLID
- REJECT FOOD WITH ICE CRYSTALS
  - ON THE PRODUCT OR PACKAGING
- REJECT THAWED AND REFROZEN
- REJECT FOOD WITH FLUIDS OR FROZEN LIQUIDS

# 41

# 135



## PROPER STORAGE

- **LABEL TCS FOOD**
  - PREPPED IN-HOUSE
  - HELD LONGER THAN 24 HOURS
- **LABEL MUST INCLUDE**
  - NAME OF FOOD
  - DATE TO BE SOLD, EATEN, OR THROWN OUT
- STORE FOR 7 DAYS OR LESS AT 41°F (5°C) OR LOWER
- AFTER 7 DAYS, THROW OUT



## PROPER STORAGE

- ROTATE INVENTORY — USE OLDEST FIRST
- FIRST-IN, FIRST-OUT (FIFO) METHOD
  1. IDENTIFY USE-BY OR EXPIRATION DATE
  2. STORE EARLIER ITEMS FIRST
  3. USE ITEMS STORED IN FRONT FIRST





## PREVENTING CROSS-CONTAMINATION DURING STORAGE

### TOP-TO-BOTTOM ORDER:

1. READY-TO-EAT FOOD
  2. SEAFOOD
  3. WHOLE CUTS OF BEEF AND PORK
  4. GROUND MEAT AND GROUND FISH
  5. WHOLE AND GROUND POULTRY
- BASED ON MINIMUM INTERNAL COOKING TEMPERATURES



## PREPARATION

FREEZING DOES NOT KILL BACTERIA  
NEVER THAW AT ROOM TEMPERATURE

### THAW TCS FOOD:

- IN A COOLER
  - 41°F (5°C) OR LOWER
- SUBMERGED UNDER RUNNING WATER
  - 70°F (21°C) OR LOWER
  - NEVER LEAVE FOOD ABOVE 41°F (5°C) FOR > 4 HOURS
- IN A MICROWAVE OVEN
- AS PART OF THE COOKING PROCESS



## HOLDING OF FOODS

- **HOT FOOD AT** 135°F (57°C) OR HIGHER
- **COLD FOOD AT** 41°F (5°C) OR LOWER
- CHECK TEMPERATURES EVERY FOUR HOURS
- DO NOT REHEAT IN HOT-HOLDING EQUIPMENT

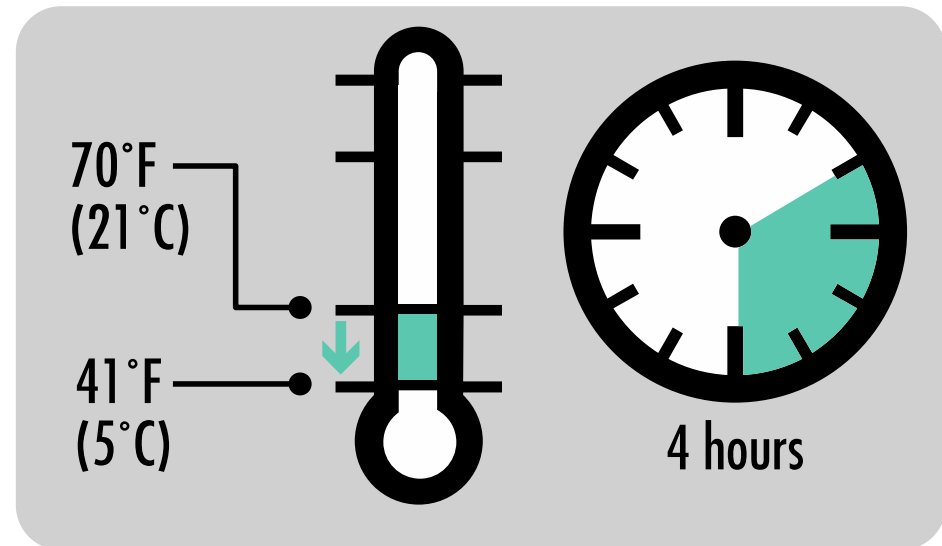
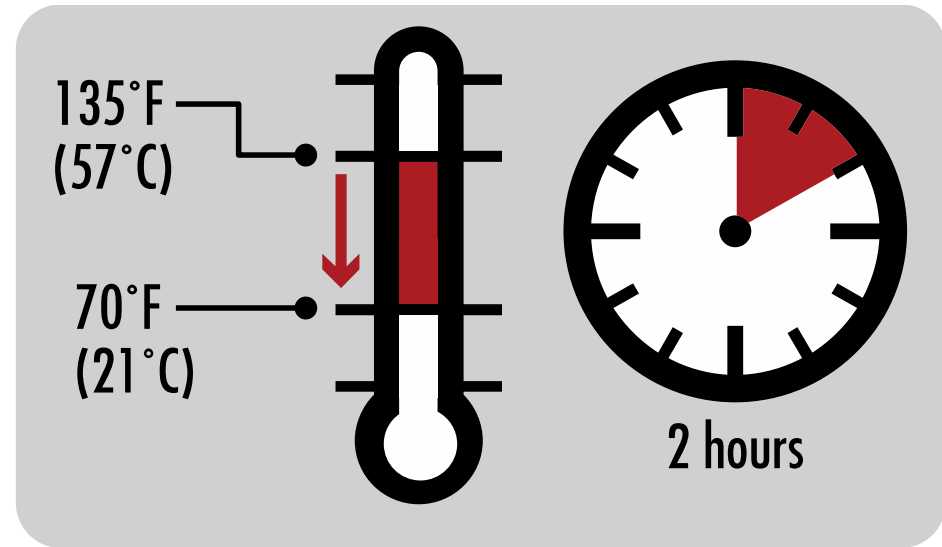


4 hours



## COOLING

- 135°F (57°C) TO 70°F (21°C) WITHIN 2 HOURS
- 41°F (5°C) OR LOWER IN THE NEXT 4 HOURS
- 70°F (21°C) WITHIN 2 HOURS
  - IF NOT REACHED, THROW OUT OR
  - REHEAT AND COOLED AGAIN





## COOLING

- CUT LARGE ITEMS INTO SMALLER PIECES
- USE SMALL OR SHALLOW CONTAINERS
- **TOOLS TO HELP COOL DOWN FOODS:**
- ICE-WATER BATH
- ICE PADDLES
- ADD ICE AS INGREDIENT
- BLAST CHILLER

### Blast Chiller

- Fully automatic
- Fan assisted cooling
- Touch screen controller and temperature display
- Replaceable door gasket
- Temperature probe
- 100 program memory
- Internal rounded corners for easy cleaning
- Simple access to fans for cleaning
- Accepts 1/1 Gastronorm and 60x40 Euronorm trolleys (not supplied)

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A stainless steel blast chiller with its door open, showing internal fans and a control panel. The background is a blue and white gradient.The logo for Koolmax Group Limited, featuring the company name in a stylized font with a globe icon.