

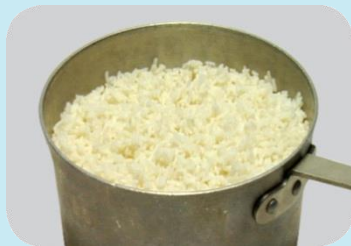


Chapter 2

The Microworld

Food Most Likely to Become Unsafe

Food That Favors the Growth of Pathogens *continued*



**Heat-treated plant food,
such as cooked rice,
beans, and vegetables**



**Tofu or other
soy-protein food**



**Sprouts and
sprout seeds**



**Sliced melons,
cut tomatoes, and
cut leafy greens**



**Untreated garlic-and-oil
mixtures**



Chapter 4

Personal Hygiene

Handwashing

How to Wash Hands



1 **Wet hands and arms with running water as hot as you can comfortably stand. (at least 100°F/38°C)**



2 **Apply soap. Use enough to build up a good lather.**



3 **Vigorously scrub hands and arms for ten to fifteen seconds. Clean under fingernails and between fingers.**



4 **Rinse hands and arms thoroughly under running water.**



5 **Dry hands and arms with a single-use paper towel or hand dryer. Consider using a paper towel to turn off the faucet.**



Chapter 6
The Flow of Food:
Purchasing and Receiving

Receiving and Inspecting Specific Food

Sliced Melons, Cut Tomatoes, and Cut Leafy Greens

- **Must be received at 41°F (5°C) or lower**





Chapter 6

Storage

Refrigerated and Frozen Storage

Preventing Cross-Contamination

- **Store food items in the following top-to-bottom order:**
 - Ready-to-eat food
 - Seafood
 - Whole cuts of beef and pork
 - Ground meat and ground fish
 - Whole and ground poultry





Chapter 7

The Flow of Food: Preparation

Prepping Specific Food

When prepping produce:

- **Make sure produce does not touch surfaces exposed to raw meat and poultry**
- **Refrigerate and hold sliced melons, cut tomatoes, and cut leafy greens at 41°F (5°C) or lower**
- **Do not serve raw seed sprouts if you primarily serve high-risk populations**



Prepping Specific Food

When prepping produce:

- **Wash it thoroughly under running water before:**
 - Cutting
 - Cooking
 - Combining with other ingredients
- **Produce can be washed in water containing ozone to sanitize it**
 - Check with your local regulatory authority



Preparation Practices That Require a Variance

You need a variance if prepping food in these ways: *continued*

- Packaging food using a reduced-oxygen packaging (ROP) method
- Sprouting seeds or beans
- Offering live, molluscan shellfish from a display tank

Cooking Requirements for Specific Food

Minimum internal cooking temperature:

155°F (68°C) for 15 seconds

- **Ground meat—beef, pork, and other meat**
- **Mechanically tenderized meat**
- **Injected meat—including brined ham and flavor-injected roasts**
- **Ground seafood—including chopped or minced seafood**
- **Eggs that will be hot-held for service**



Partial Cooking

If partially cooking meat, seafood, poultry, or eggs or dishes containing these items:

1. **Never** cook the food longer than 60 minutes during initial cooking
2. Cool the food immediately after initial cooking
3. Freeze or refrigerate the food after cooling it
4. Heat the food to at least 165°F (74°C) before selling or serving it
5. Cool the food if it will not be served immediately or held for service.



Children's Menus

Children should not be offered these items raw or undercooked:

- Meat
- Poultry
- Seafood
- Eggs



Reheating Roasts

Roasts can be reheated to these alternative temperatures:

| Temperature | Time |
|--------------|-------------|
| 130°F (54°C) | 112 minutes |
| 131°F (55°C) | 89 minutes |
| 133°F (56°C) | 56 minutes |
| 135°F (57°C) | 36 minutes |
| 136°F (58°C) | 28 minutes |
| 138°F (59°C) | 18 minutes |
| 140°F (60°C) | 12 minutes |
| 142°F (61°C) | 8 minutes |
| 144°F (62°C) | 5 minutes |
| 145°F (63°C) | 4 minutes |





Chapter 8

The Flow of Food: Service

Preset Tableware

If you preset tableware:

- Prevent it from being contaminated
 - Wrap or cover the items

Table settings do not need to be wrapped or covered if extra settings:

- Are removed when guests are seated
- Are cleaned and sanitized after guests have left





Chapter 9

Food Safety Management Systems

HACCP: When a HACCP Plan Is Required

A HACCP plan is required if an operation: *continued*

- **Packages food using ROP methods including:**
 - MAP
 - Vacuum-packed
 - *Sous vide*
- **Treats (e.g., pasteurizes) juice on-site and packages it for later sale**
- **Sprouts seeds or beans**
- **Offers live, molluscan shellfish from a display tank**





Chapter 10

Sanitary Facilities and Equipment

Handwashing Stations

Handwashing stations must have:



**Hot and cold
running water**



Soap



**A way to dry
hands**



**Garbage
container**



Signage



Chapter 11

Cleaning and Sanitizing

Guidelines for the Effective Use of Sanitizers

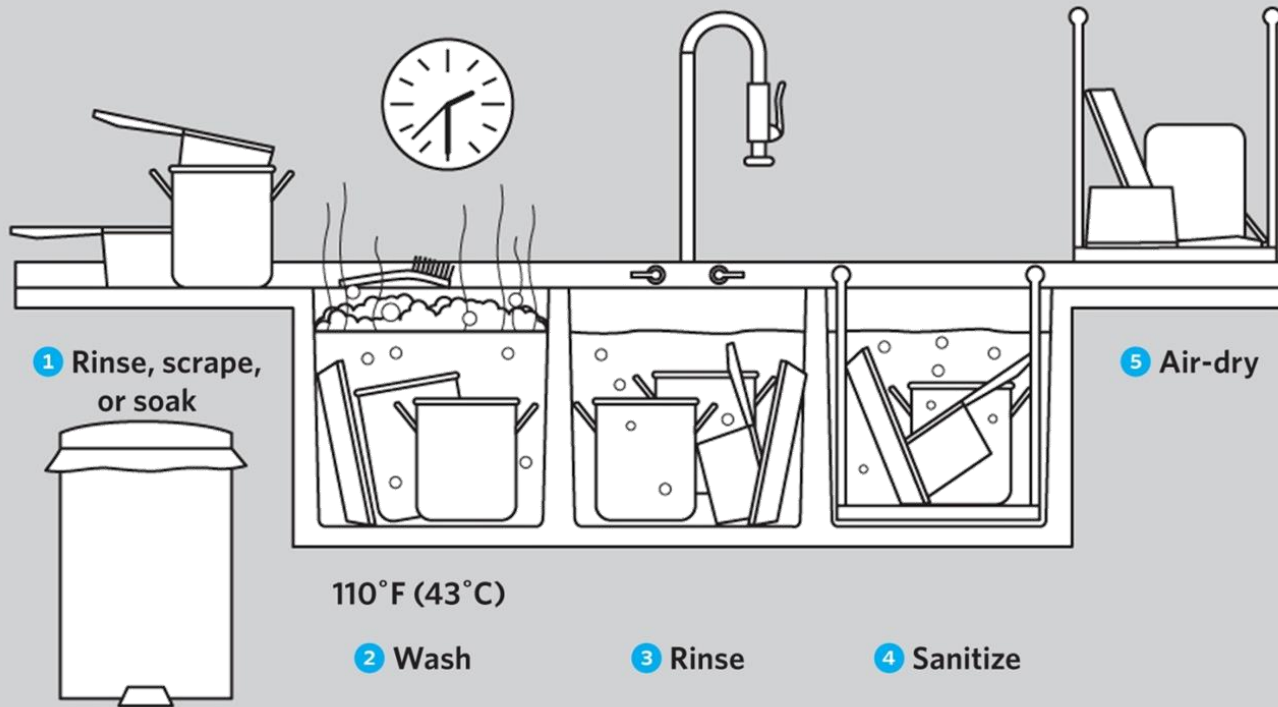
| Chlorine | | |
|--------------------------------------|---|--|
| Water temperature | $\geq 100^{\circ}\text{F}$ (38°C) | $\geq 75^{\circ}\text{F}$ (24°C) |
| Water pH | ≤ 10 | ≤ 8 |
| Water hardness | As per manufacturer's recommendations | |
| Sanitizer concentration range | 50–99 ppm | 50–99 ppm |
| Sanitizer contact time | ≥ 7 sec | ≥ 7 sec |

Guidelines for the Effective Use of Sanitizers

| | Iodine | Quats |
|--------------------------------------|--|---|
| Water temperature | 68°F (20°C) | 75°F (24°C) |
| Water pH | ≤5 or as per manufacturer's recommendation | As per manufacturer's recommendation |
| Water hardness | As per manufacturer's recommendation | 500 ppm or as per manufacturer's recommendation |
| Sanitizer concentration range | 12.5–25 ppm | As per manufacturer's recommendation |
| Sanitizer contact time | ≥ 30 sec | ≥ 30 sec |

Three-Compartment Sinks

Steps for Cleaning and Sanitizing



Cleaning and Sanitizing in the Operation *continued*

Never:

- Dump mop water or other liquid waste into toilets or urinals
- Clean tools in sinks used for:
 - Handwashing
 - Food prep
 - Dishwashing



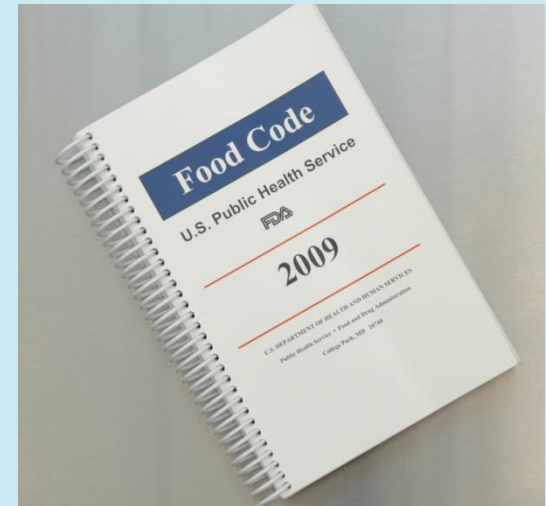


Chapter 13
Food Safety Regulations
and Standards

The *FDA Food Code*

The *FDA Food Code*

- **Outlines federal recommendations for food safety regulations for the foodservice industry**
- **Based on input from the Conference for Food Protection (CFP)**
- **Although FDA recommends adoption by each state, it cannot require it**



FDA Risk Designations

Risk Designations for Evaluating Establishments

- **Priority items**
 - Prevent, eliminate, or reduce hazards (e.g., handwashing)
- **Priority foundation items**
 - Support priority items (e.g., soap at a handwashing station)
- **Core items**
 - Relate to general sanitation and maintenance, (e.g., keeping equipment repaired)





Chapter 14

Employee Food Safety Training

Critical Knowledge for Employees

Employees should receive training in: *continued*

- **Safe food preparation**
 - Preventing time-temperature abuse
 - Identifying and preventing cross-contamination
 - Handling food safely during the flow of food
 - Identifying food allergens and preventing allergic reactions

