

Sustainable Food Safety 201



PEAK SHIFT

CHAPTER 12

Cleaning and Sanitizing

Remove soil. Verify treatment. Protect clean items.

2026 FDA model Food Code | 4-601.11; 4-702.11; 4-703.11

BASIS: 2026 FDA MODEL FOOD CODE



Cleaning, Sanitizing, and Disinfecting Have Different Jobs

Clean

Remove food, grease, and other soil; food-contact surfaces must be clean to sight and touch.

Sanitize

After cleaning, use a validated heat or chemical process to reduce microorganisms.

Disinfect

Use the labeled process for pathogens not controlled by the available sanitizer.

Changing the chemical does not eliminate the need to remove soil.

Purpose

BASIS: FDA MODEL FOOD CODE

Task Changes Can Require Cleaning Now

Raw to ready-to-eat

Clean and sanitize before the surface changes from raw food to ready-to-eat food.

Other transitions

Different raw animal foods and raw produce-to-TCS transitions have specific cleaning triggers.

Contamination

Act whenever contamination may have occurred; clean probes before using or storing them.

Do not wait for a scheduled cleaning when the task has already changed.

The Raw-Meat Sequence Exception Is Narrow

Qualifying sequence

Successive raw meat and poultry types each require a higher cooking temperature than the last.

Outside the exception

Raw fish, raw-to-ready-to-eat changes, and equal or lower cook-temperature sequences do not qualify.

A higher next cooking temperature is not a universal cleaning exemption.

Four Hours Is the Default TCS Interval

Ordinary use

Clean food-contact equipment and utensils used with TCS food at least every 4 hours.

Sooner when needed

Task changes or possible contamination can require cleaning before 4 hours.

After cleaning

Sanitize before reuse; a quick wipe alone does not reset the cleaning interval.

Track completed cleaning, not just when someone last wiped the surface.

Refrigerated Prep Areas Need a Documented Schedule

41 F or below

Maximum interval: 24 hours.

Above 41 F through 45 F

Maximum interval: 20 hours.

Above 45 F through 50 F

Maximum interval: 16 hours.

Above 50 F through 55 F

Maximum interval: 10 hours.

The room or area temperature controls this exception, not the incoming food temperature.

Other Four-Hour Exceptions Stay Conditional

Storage and probes

Properly held stored-food containers: clean when empty; probes may remain in properly held food.

Service containers

Same properly held RTE food may be replenished under the exception; clean containers at least every 24 h.

Hot utensil water

Maintain at least 135 F; clean utensils and container at least every 24 h and before soil accumulates.

Other schedules

Storage equipment: prevent soil buildup. Other extended schedules require regulatory approval.

An exception changes an interval, not the duty to prevent contamination.

Match the Cleaner to the Soil

Detergent

Loosens ordinary food soil; use the labeled dilution and washing method.

Degreaser

Targets greasy deposits; confirm compatibility with the equipment surface.

Delimer

An acid cleaner targets mineral deposits; follow equipment and chemical directions.

Abrasive cleaner

Adds scouring action; use only where it will not damage the surface.

The cleaner solves the soil problem; it does not replace the sanitizing step.

When Soil Remains, Check the Cleaning Factors

Correct chemistry

Match the cleaner and concentration to the soil, water, and equipment instructions.

Time and temperature

Give the cleaner its required working time and temperature.

Mechanical action

Scrub, spray, or circulate effectively; expose the entire surface.

Do not move to sanitizing while the cleaning step is still incomplete.

Five Steps for Routine Manual Warewashing

1 | Scrape

Remove loose food; presoak or scrub when needed.

2 | Wash

Use the correct cleaner and friction to remove remaining soil.

3 | Rinse

Remove loosened soil and detergent with the separate rinse.

4 | Sanitize

Apply the selected heat or chemical process for its full required conditions.

5 | Air-dry

Allow draining and drying; do not wipe wet utensils dry with a towel.

Each step prepares the item for the next one.

Set Up the Sink Before the Rush

Three compartments

The standard manual arrangement separates washing, rinsing, and sanitizing.

Wash temperature

At least 110 F, or the temperature specified on the cleaning-agent label.

Clean system

Clean sinks and drainboards before use; maintain clean wash, rinse, and sanitizing solutions.

Fit and flow

Provide room for immersion and separate dirty-item holding from clean-item draining.

The wash temperature is not the chemical sanitizer temperature.

Choose the Product for the Actual Job

Read the use directions

Confirm food-contact sanitizing use, dilution, temperature, contact time, and finishing steps.

Measure, do not guess

Parts per million (ppm) expresses concentration; too weak and too strong are both problems.

Keep uses separate

Sanitizer, disinfectant, detergent, and descaler are not interchangeable.

Label and separate

Name each working chemical; protect food and clean supplies with separate storage.

The product name alone does not identify the correct use conditions.

Concentration Is Only One Control

Time and coverage

Keep every required surface in contact with the solution for the full labeled time.

Temperature and pH

Other than chlorine, iodine or quat: 2026 adds 75 F minimum unless the EPA-registered label says otherwise. Scored 2022+2024: follow that label.

Hardness and soil

Dissolved minerals matter for quats; food debris means the solution needs attention.

A passing strip result cannot prove that all sanitizing conditions were met.

Chlorine: Pair Concentration with Temperature and pH

50-99 ppm | pH 8 or below

Minimum solution temperature: 75 F.

**50-99 ppm | above pH 8
through 10**

Minimum solution temperature: 100 F.

Other table entries

25-49 ppm: at least 120 F; 100 ppm: at least 55 F; both at pH 10 or below.

The same chlorine reading can require a different temperature.

Chlorine Contact Time: Know the Conditions

Ordinary chlorine route

At least 10 seconds with the required concentration, pH, and temperature; respect the label.

Seven-second route

50 ppm exactly: pH 10 or below and at least 100 F, OR pH 8 or below and at least 75 F; follow label.

The seven-second provision is not a blanket rule for 50-99 ppm.

Iodine Has Its Own Conditions

Concentration

12.5-25 ppm.

Temperature and pH

At least 68 F; pH 5 or below, or no higher than the manufacturer specifies as effective.

Contact time

Standard other-chemical route: at least 30 seconds, consistent with the EPA-registered label.

Do not borrow chlorine temperature or contact-time rules for iodine.

Quats: Use the Label Concentration

Concentration

Use the manufacturer's labeled food-contact sanitizing concentration, not a universal 200 ppm.

Temperature and hardness

At least 75 F; hardness 500 mg/L or less, or no greater than the EPA label specifies.

Contact time

Standard other-chemical route: at least 30 seconds, consistent with the EPA-registered label.

A familiar number does not override a different product label.

Match the Test Kit to the Chemical and Range

Correct test

Use the kit for the active chemical and expected concentration range.

Correct technique

Follow the kit label for sampling, timing, and reading; do not improvise the result.

Correct action

Investigate a failed result, prepare compliant solution, retest, and reprocess affected items.

The model Code requires accurate testing for disinfecting solutions too.

Manual Hot-Water Sanitizing Is an Immersion Process

Water

Maintain the sanitizing water at 171 F or above.

Time

Immerse cleaned utensils for at least 30 seconds.

Equipment

Use suitable heating and a rack or basket that permits safe, complete immersion.

Hot rinse water or steam nearby does not prove sanitization.

A Warewasher Needs the Right Setup and Load

Read the data plate

Use the machine's temperatures, cycle time or conveyor speed, and applicable rinse pressure.

Prepare and load

Scrape first; expose surfaces to spray and allow drainage.

Maintain

Keep jets, screens, and working solutions clean; correct faults before relying on the cycle.

A completed cycle is useful only when the machine and load meet the process.

Hot-Water Machines: Know Which Temperature You Read

Utensil surface

Must reach 160 F, measured with an irreversible registering temperature indicator.

Fresh rinse at manifold

At least 180 F for other machines; at least 165 F for stationary-rack, single-temperature machines.

Upper limit

Normally no more than 194 F at the manifold; the specified handheld high-pressure system is excepted.

Manifold water and utensil-surface temperature are different measurements.

Verify the Surface, Not the Air

Suitable indicator

Use an irreversible registering device for utensil-surface temperature, following its instructions.

Failed result

Stop using the failed process; correct loading, heat, or equipment faults and verify again.

Affected utensils

Reprocess items that have not received a verified compliant sanitizing step.

A passing gauge cannot cancel a failed utensil-surface test.

Chemical Machines Follow Their Own Verified Process

Machine settings

Follow the data plate and instructions, including cycle time and operating temperatures.

Chemical conditions

Verify the sanitizer delivery, concentration, temperature, and required contact conditions.

Wash is still warm

Spray-type chemical-sanitizing machines require a wash solution of at least 120 F.

Do not apply a hot-water machine's 180 F rinse rule to every chemical machine.

Wiping Cloths Need Controlled Use

Wet counter cloths

Hold in correctly prepared sanitizer between uses; launder daily.

Separate raw-food work

Keep cloths used on raw-animal-food surfaces separate from other cloths.

Protect the bucket

Keep solution free of visible soil and debris; store off the floor without contaminating supplies.

Dry service cloths

Cloths for service spills on tableware or carry-out containers stay dry and serve no other purpose.

A sanitizer bucket is not a substitute for a full cleaning procedure.

Brushes and Sponges Can Spread Soil

Use the right tool

Reach seams without damaging the surface; maintain and store tools to prevent contamination.

Dry-food brushes

Tools used to dry-clean non-TCS food residues must not be used for other purposes.

Sponge limitation

Do not use sponges on cleaned and sanitized or in-use food-contact surfaces.

Mop drying

Position used mops to air-dry without soiling walls, equipment, or supplies.

The cleaning tool must not become the next contamination source.

Can Openers and Slicers Need Access to Hidden Parts

Disassemble safely

Follow equipment instructions and expose food-contact parts that cannot be cleaned in place.

Inspect the food path

Clean blade guards, seams, and can-opener cutting parts, not only the housing.

Maintain the surface

Keep opener cutting parts sharp; resurface uncleanable boards or discard if they cannot be resurfaced.

Hidden food-contact parts follow the same cleaning triggers as visible ones.

Ice Machines and Beverage Lines Need a Real Schedule

Manufacturer frequency

Follow specified cleaning intervals for ice bins, enclosed ice-maker parts, and beverage equipment.

No stated interval

Clean often enough to prevent soil or mold accumulation; do not wait for a complaint.

Other non-TCS uses

Iced-tea dispensers and self-service utensils: at least every 24 h, except qualifying dry-cleaning uses.

Cold equipment is not self-cleaning equipment.

Air-Dry, Then Protect the Finished Item

Dry correctly

Air-dry or adequately drain before food contact; do not towel-dry wet utensils.

Store protected

Clean, dry, splash-free location; self-draining position; covered or inverted.

Keep clearance

Ordinarily at least 6 inches above the floor; limited closed-package support exceptions apply.

The job is unfinished if storage immediately recontaminates the surface.

Vomit or Diarrhea Activates the Written Response

Restrict exposure

Separate the affected area and protect people, food, and clean supplies.

Use the response kit

Trained staff follow the written plan, protective-equipment directions, and disinfectant label.

Control the entire event

Contain and remove waste, clean and disinfect, evaluate food, and treat cleanup tools appropriately.

Do not treat a bodily-fluid event as an ordinary counter spill.

Disinfection Has Its Own Label and Return-to-Use Steps

Trigger

When available sanitizers do not control the pathogen, specified contamination events require disinfection.

Apply and verify

Follow EPA-registered directions; use the correct concentration test and full contact time.

Food-contact finish

Rinse disinfectant with potable water unless its EPA label specifies otherwise; restore sanitary use.

A no-rinse sanitizer claim does not automatically apply to disinfectant use.

Disinfection: added in Dec. 2024 Supplement; retained in 2026

BASIS: FDA MODEL FOOD CODE

Build a Schedule Staff Can Actually Follow

Name the job	List the item, hidden parts, cleaning trigger or interval, and responsible position.
Name the method	Identify tools, product, test method, contact conditions, and safe equipment access.
Verify and correct	Check completion and results; correct failures and document the action as house practice.
Include nonfood-contact areas	Prevent soil buildup on equipment exteriors; residues can support microbes and provide pest harborage.
Daily equipment jobs	Cooking/baking food-contact surfaces: at least every 24 h; qualified hot-oil exception. Microwave cavities/door seals: every 24 h.

A checked box is not evidence that an inaccessible part was cleaned.

Recap | Stop, Clean, Verify, Protect

Choose the trigger

Task change, contamination, required interval, or a qualified exception.

Complete the process

Scrape, wash, rinse, sanitize, and air-dry for routine manual warewashing.

Verify the method

Chemical conditions and label, or the correct heat measurement and time.

Protect the next use

Clean tools and storage; a separate written disinfection response for bodily-fluid events.

The manager checks what happened to the surface, not just what was poured into the bucket.