



# It's Clean, But Is It Sanitized?

The countertop or meat slicer may look sparkling clean but the surfaces may be contaminated with bacteria waiting for an opportunity to contaminate foods and possibly make people sick. All food contact surfaces should be cleaned first, then sanitized.

## Cleaning vs. Sanitizing: What's the Difference?

*Cleaning* physically removes food or soil from a surface usually with the aid of a detergent, water and some muscle power. Cleaning agents include detergents, solvents, abrasive cleaners, acid cleaners or some combination of these. Read the manufacturer's product description to help you choose the cleaning agent that best serves your cleaning needs.

*Sanitizing* takes cleaning a step further by reducing the number of bacteria and other microorganisms. Sanitizing can help prevent disease transmission, contamination and/or spoilage. Sanitizing, however, is not a substitute for cleaning. In addition, a sanitized surface is not *sterile* or completely free of bacteria. Sterilization is impractical for a foodservice facility.

## Why Sanitize?

Contaminated surfaces can contaminate foods. A contaminated cleaning cloth, in turn, can do more harm than good. Bacteria can thrive in damp, food-contaminated cloths.

As shown in the table, researchers found more bacteria present on food preparation surfaces *after* cleaning due to cross-contamination by the cleaning cloth. Sanitizing with an appropriate agent reduced the number of bacteria to zero or an acceptable level.

Equipment surveyed	Number of bacteria found		
	After preparing food	After cleaning	After sanitizing
Serving surface	7	>300*	0
Refrigerator shelf	13	86	0
Meat cutting board	27	120	0
Sandwich counter	55	70	0
Meat slicer	120	>300	41
Pastry counter	>300	>300	0
Salad sink	>300	>300	0

\*300 is the maximum number of bacteria that can be accurately counted in a standard plate count.  
Source: Letters in Applied Microbiology 16:173-177, 1993.

## Using Sanitizing Agents

Sanitizing may be accomplished manually or with equipment such as dishmachines using heat (as steam or hot water) or chemicals. When heat sanitizing, using a higher temperature generally shortens the time required to kill bacteria. According to the 1995 Food Code, the temperature/time requirement for the sanitizing step in manual dishwashing is 171°F for at least 30 seconds.

Chemical sanitizing generally involves either immersing the object in a sanitizing solution for a specific amount of time or spraying/wiping the object with the solution and allowing it to air-dry. Chemical sanitizers differ in their effectiveness on certain organisms and in the concentration, temperature and contact time required to kill bacteria. Common chemical sanitizers include chlorine, iodine and quaternary ammonium compounds or "quats." Scented bleaches are not recommended as sanitizers.

- ✓ Sanitizing solutions *must* be correctly prepared to be effective. Follow the manufacturer's instructions when preparing sanitizing solutions, and check the concentration of the sanitizer using a test kit. Using too high a concentration can result in off-flavors or odors in foods, can corrode equipment, waste money and violate local health department rules. Also closely follow the temperature recommendations for sanitizing agents.

### How to Test Sanitizer Concentration

#### Test paper method:

1. Prepare sanitizing solution according to the manufacturer's directions.
  2. Tear off a small strip of test paper, or use a precut portion.
  3. Dip test strip in sanitizer, or touch the strip to a plate treated with the sanitizer.
  4. To determine concentration, compare the color of the strip to the chart included with the test kit.
- ✓ When using combination products, such as detergent-sanitizers, cleaning and sanitizing must be done in two separate steps. First use the detergent-sanitizer to clean, then prepare another solution of the same agent to sanitize.

### Five Steps to Sanitary:

1. Scrape and/or pre-soak equipment.
2. Wash with an appropriate detergent and hot water (at least 110°F).
3. Rinse with clear hot water (at least 110°F).
4. Sanitize with an appropriate agent. If using a hot water sanitizing rinse, the temperature/exposure time must be at least 171°F for 30 seconds.
5. Air-dry.

### Don't Cross-Contaminate with Cleaning Cloths

- ✓ Use separate cloths for cleaning and sanitizing.
- ✓ Launder cleaning cloths frequently.
- ✓ Store cloths in sanitizing solution between uses.
- ✓ Prepare fresh sanitizing solution regularly.



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References: Food Code, Food and Drug Administration, 1995; Applied Foodservice Sanitation, 4th Edition, National Restaurant Association, 1992.

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