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Sanitary Surroundings: Setting Up for Safe Food

Cooperative Extension Service
South Dakota State University

SANITARY SURROUNDINGS
Setting Up for Safe Food

How you set up and maintain your food program determines how many routes bacteria have to invade and thrive.

CAUSES OF FOOD CONTAMINATION

There are three ways that food may become contaminated in food programs:

1. **Contaminated Products:** Some bacteria are already present in the food that is taken into the food programs. Contamination may originate naturally in the raw materials or it may be introduced during processing.
2. **Cross-contamination:** This is the transfer of harmful organisms to food by other food, utensils, dishes, equipment, work surfaces, etc. One of the most common sources of bacterial contamination in any food establishment is poor worker hygiene.
3. **Other Transport Mechanisms:** Bacteria can also be transmitted to food by insects, rodents, airborne dust, and water.

WORK SPACE ORGANIZATION

- Visitors (e.g., clients, children, and other beings not essential to your food operation) to the kitchen area should be discouraged.
- No animals are allowed in the food operation.
- No smoking is allowed in the food operation.
- A separate area should also be designated for worker breaks and for storing personal items (e.g., coats, purses, employee food, etc.).
- Garbage cans should be stored tightly covered and away from food handling and storage areas. (To minimize insects and rodents, empty garbage cans often.)

CUTTING BOARDS

Cutting boards can be an especially dangerous source of bacterial contamination. The tiny grooves made by knives hide food and water sources that are perfect for bacterial growth.

- Use separate cutting boards for different types of food (e.g., 1 for meat, 1 for bread products, 1 for fresh vegetables, etc.)
- Clean cutting boards after each use by:
  - scrubbing in hot, soapy water
  - rinsing
  - dipping in a sanitizer solution of 1 tsp. of bleach per gallon of water (50 ppm chlorine)
  - allowing the board to air-dry

DISHWASHING PROCESS

1. **Scrape and pre-rinse** dishes. Soak only if absolutely necessary.
2. **Prepare** all dishwashing sinks by washing, rinsing, and disinfecting them.
3. **Wash** dishes in hot, soapy water (110˚F). Change the wash water when it is cold or dirty.
4. **Rinse** in clean hot water. Change rinse water when cold or dirty.
5. **Sanitize** dishes by immersion for at least 30 seconds in very hot water (171˚F) or for 10 seconds in lukewarm water (75˚F) with 50ppm chlorine (1 tsp bleach per gallon of water).
6. **Air-dry** dishes, then store them in a clean area.

Note: Dishwashers may be used in place of steps 2 through 6 above. Commercial dishwashers are recommended and must reach recommended final rinse temperature. The final rinse temperature is usually 160°F on the surface of the dishes; the final rinse temperature varies by type of machine. If using a chemical sanitizer, follow manufacturer's directions.

CLEANING METHODS

Wash, rinse, and sanitize counters often. **Sanitize sinks** used for washing food or dishes between each use.

Store in-use cleaning rags in a bucket of sanitizer containing 1 tbsp of bleach per gallon of water. Never add soap to sanitizer, because it forms a film and blocks the disinfecting action of chlorine. Replace bleach solution in sanitizer buckets every 2 hours, or sooner if visibly dirty.

Disinfect floors with 3/4 cup of bleach per gallon of warm water. Empty water between each use and hang mop to dry.

Machine wash linens in hot water and disinfect with bleach. Begin each day with fresh dish cloths and towels and replace as needed.

SANITIZERS

"Sanitizing" means reducing the number of bacteria on a surface by cleaning with a disinfectant such as bleach.

In general:

- To sanitize counters and appliances, use 100 ppm chlorine (1/2 tbsp bleach per gallon of water)
- To sanitize dishes, use 50 ppm (1 tsp bleach per gallon of water)

In correct concentrations, bleach evaporates leaving little residue. Too much chlorine residue on a dish or utensil can cause chemical poisoning.

Bleach in a bottle gradually loses strength as it ages. To correctly determine sanitizer concentration, use chlorine test strips. The strips turn different shades of gray at different concentrations.

Note: Bleach solution used in spray bottles should be mixed fresh every day. Surfaces cleaned with bleach must be air-dried to give the chlorine time to work and to prevent recontamination.

Adapted from the Safe Aid Series, Montana State University Extension Service, 1996.

DIGGING DEEPER: SANITARY SURROUNDINGS

1) Which statement about sanitizing is correct?
   a) One teaspoon of bleach per gallon of water is used to sanitize counters.
   b) Bleach and water solutions in spray bottles should be mixed fresh every day.
   c) Test strips can be used to determine how hot the water is.
   d) Bleach and soap together make an effective sanitizer.

2) Which is the proper sequence for washing dishes by hand?
   a) scrape dishes, wash, rinse, sanitize, towel dry
   b) scrape dishes, prepare sinks, wash, rinse, air-dry
   c) scrape dishes, prepare sinks, wash, rinse, sanitize, air-dry
   d) scrape dishes, prepare sinks, wash, sanitize, rinse, air-dry

3) Which is an example of cross-contamination?
   a) a carton of milk left on the counter for 2 hours
   b) the same knife is used to cut all the pumpkin pies
   c) a chicken thawing in the refrigerator drips onto a cheesecake
   d) the same cutting board is used to cut up carrots and broccoli for a stir-fry

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