USACHPPM
Readiness thru Health
57-019-1205

Just the Facts...

Procedures for Cleaning Contaminated Ice Machines

Introduction. Contaminated ice is a frequent finding on food sanitation inspection reports. Ice has many functions in a food operation. Ice is a food or food ingredient and is also used for cold food display, for chilling packaged food and drinks, and to rapidly chill cooked foods. Contaminated ice has been associated with numerous foodborne disease outbreaks.

Ice machines are food equipment. The inside surfaces, which contact the ice, including the ice storage bin are food contact surfaces and must be cleaned and sanitized regularly and kept in good repair.

These procedures outline the cleaning and disinfection procedures for the following ice machines:

- Commercial ice makers with removable ice contact surfaces
- Commercial ice makers with nonremovable ice makers
- Home or residential type refrigerators with built-in ice makers

Follow these procedures in order if water serving an ice machine is contaminated or tests positive for bacteria:

1. Turn off or unplug the ice machine. Put a Do Not Use sign on the machine. If the machine is hard wired to the electrical system, make sure the fuse or circuit breaker is removed or locked out so the machine cannot be turned on during the following steps.
2. Turn off the water supply to the machine.
3. Empty and discard all remaining ice in the machine.
4. Drain all water from the machine.

The supporting PVNTMED unit will determine if the ice machine must be decontaminated. Most times the machine will have to be cleaned and disinfected before returning to ice production. If PVNTMED determines the machine must be decontaminated, follow the appropriate procedures.

Cleaning and disinfecting procedures for commercial ice-making machines with removable ice contact surfaces. (If available, follow the manufacturer's recommended cleaning and sanitizing procedures.)

If not, follow steps 1 thru 4 above, then:

5. Remove all ice-contact parts from the machine.
6. Wash all parts in hot detergent water. Use a soft brush to remove rust and dirt from metal parts. Nylon and rubber parts including gaskets and O rings should be washed using a cloth.
7. Rinse thoroughly in clean water.
8. Sanitize parts in a solution of 1 ounce unscented household bleach in 3 gallons of clean potable water. Leave parts in solution for at least 30 seconds. Let parts air dry.
9. Thoroughly wash hands before handling sanitized parts.
10. Reassemble the machine. Wipe all exposed surfaces with a fresh chlorine solution. Let air dry.
11. Restart the machine. Discard the first ice produced.
12. Let the bin or reservoir fill and run bacterial samples on water supply and ice.
13. If negative, ice can be used for food operations. If positive, reclean and sanitize machine.

Cleaning and sanitizing procedures for commercial ice-making machines with nonremovable ice contact surfaces.

Machines with nonremovable ice contact surfaces that are NSF/ANSI Standard 12 listed are designed to have sanitizing solutions circulate through the machines.

If available, follow the manufacturer's recommended cleaning and sanitizing procedures. The manufacturer may state that chlorine solutions not be used during the clean in place procedures. If not:

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Food Sanitation and Environmental Health, DEHE
410-436-5458 or DSN 584-5458

1. Remove any residual ice from the ice reservoir or shoots. Turn off the machine to allow any other ice in the machine to melt.

2. Turn the water supply and electricity on. Drain sufficient water through the machine to flush any residual water and dirt from the machine.

3. Run the machine through 2 or 3 freezing cycles. Discard any ice made.

4. Turn the water supply off.

5. Drain the water and any ice inside the system.

6. Circulate a warm water cleaning solution through the machine for at least 2 minutes. Drain the system.

7. Circulate clean potable water for 2 minutes. Drain the system.

8. Circulate a sanitizing solution. Use either a quaternary ammonia compound following manufacturer's instructions, or use 1 ounce household bleach in 3 gallons of clean potable water. Run the solutions through the machine for at least 2 minutes. Drain the system.

9. Wash, rinse, and sanitize any storage bins.

10. Return the drain valves to their normal position and start the machine.

11. Discard the first ice produced.

12. Let the bin or reservoir fill and run bacteria test samples on water supply and ice.

13. If negative, ice can be used for food operations. If positive, reclean and sanitize machine and check for problems with the potable water supply.

Cleaning and disinfecting procedures for residential ice-making machines. (If available, follow the manufacturer's recommendations.)

1. Determine if ice maker is completely or partially removable.

<u>If removable</u>:

2. Run ice maker through 2 or 3 freezing cycles. If refrigerator has a built-in water dispenser then a longer flush is required to flush the water reservoir.

3. Remove ice storage bin, ice maker unit, and any other removable components.

4. Wash in hot soapy detergent solution.

5. Rinse in clean potable water.

6. Sanitize parts in a solution of 1 ounce unscented household bleach in 3 gallons of clean potable water. Leave parts in solution for at least 30 seconds. Let parts air dry.

7. Wash hands thoroughly. Reassemble the unit and return the ice machine to service.

8. Discard the first ice produced.

9. Let the bin or reservoir fill and run bacteria samples on water supply and ice.

10. If negative, ice can be used for food operations. If positive, reclean and sanitize machine and check for problems with the potable water supply.

<u>If not removable</u>:

2. Run the ice maker through 2 or 3 freezing cycles or flush the water supply line including the water dispenser and water reservoir.

3. Discard ice and return the ice bin to the freezer.

4. Use a spray bottle with a chlorine solution (1 ounce household bleach to 2 gallons of water. Spray all exposed surfaces including ice shoots and freezing surfaces. Let surfaces air dry.

5. Clean and sanitize ice bin and any other removable parts. Follow procedures for ice machines with removable ice surfaces, above.

6. Wash hands thoroughly. Reassemble the unit and return the ice machine to service.

7. Discard the first ice produced.

8. Let the bin or reservoir fill and run bacteria samples on water supply and ice.

9. If negative, ice can be used for food operations. If positive, reclean and sanitize machine and check for problems with the potable water supply.

These procedures were extracted from a variety of sources including the California State Department of Health Services.