



Bacteria in the Cooler

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The number of gallons of water flowing through water coolers has nearly doubled in the last few years, rising from some 270 million in 1985 to more than 460 million last year. Part of the increase, not just in offices but also in homes, schools, and hospitals, is no doubt due to consumers' concerns about the safety of tap water. But, ironically, many coolers may be harboring unhealthfully high levels of bacteria that can cause nausea and diarrhea in some people.

When scientists checked the bacterial count of water from 10 water coolers on the campus of Boston's Northeastern University, they found that in each case the count reached at least 2,000 potentially harmful organisms for every thousandth of a liter of water, or four times the 500-organism limit the government recommends. In some coolers, particularly those that were used frequently, counts exceeded one million - or 2,000 times the government's recommended ceiling. The problem, say researchers, is not. That water delivered fresh in those large, see-through containers has high levels of organisms; water drawn directly from bottles (rather than dispensed through coolers) consistently falls well below the government's recommended bacteria limit. Instead, it appears that organisms from each new bottle of water adhere to a cooler's reservoir - the "well" in which the bottle sits - and also to its hot and cold water spigots, accumulating over time and thereby boosting the bacterial count of any water that passes through those areas on the way to a cup or glass.

Although healthy people are unlikely to become ill drinking such water, some of the bacteria are capable of causing the vomiting and diarrhea characteristic of an illness known as gastroenteritis.

When was the Last Time Your Bottled Water Vendor Sanitized Your Coolers?

What are the sanitizing instructions?

If sanitizing is required, a solution can be made by adding 1/2 teaspoonful of Clorox® to

(1) gallon of water. Do not use a stronger sanitizing solution. Wash the cooling tank and baffle in the solution. Rinse immediately. Do not allow sanitizing solution to remain in the cooling tank more than 5 minutes. On hot models, do not allow sanitizing solution to enter hot tank; plug inlet to hot tank. Dispense solution through cold faucet and cook faucet if so equipped. Rinse through faucet(s) with clean water. Remove plug from hot tank water inlet. Drain hot tank and flush with clean water.

What are the cleaning instructions for the Hot tank?

Bottle water coolers need to be cleaned periodically to prevent mineral build-up inside the heating tank. The frequency of cleaning is determined by the quantity of minerals in the bottle water and the amount of water used.

Heating tanks may require cleaning when:

Normal hot water flow appears restricted.

Noisy heating cycles are heard.

Water in the cooling tank is very warm.

Mineral build-up has imparted a taste to the water.

Please read and follow all directions to prevent damage to the unit and to the user.

Caution: Because this cleaning process involves very hot water that may scald, the use of rubber gloves is recommended. KEEP CHILDREN AWAY.

Materials you will Require

- Four ounces (113 grams) of citric acid crystals. Your local drug store or grocery store should have this.
- A pair of rubber gloves
- A bucket or pan with a two gallon capacity
- One 1/4" (7mm) socket wrench. See #6 under "cleaning procedure".
- A funnel with a 1/2" (13mm) diameter at the end
- A quart-measuring container for hot liquids

Cleaning Procedure

- Unplug the service cord
- Draw water from the hot faucet until the water is cool
- Remove the bottle from the unit. Caution: A nearly full bottle of water weighs over forty pounds and can be awkward to handle. It may be necessary for you to drain water from the bottle until it becomes manageable.
- Remove the bottle gasket or bottle ring (if applicable)
- Remove the plastic baffle
- Drain Hot Tank

- Depending on the type and location of the drain plug, a side panel may have to be removed. If a metal plug, use two wrenches to remove plug. If a light gray drain fitting, depress dark gray collar and remove cap or plug. If a black valve, turn the valve's petcock CCW to open.
- Drain all of the water remaining in the cooling tank through the cold faucet.
- Replace cap or plug or turn the drain valve to a closed position when tank is empty.
- Mix 4 ounces of citric acid crystals with one quart of very hot water. (Wearing rubber gloves is recommended.)
- Place a funnel inside the cooling tank at the center fitting. Carefully pour the hot solution into the funnel. Be careful not to scald your hands.
- Remove the funnel and fill the cooling tank with bottled water until the water level is about 3" (76mm) from the top. To allow the hot tank to fill, open the hot faucet until water begins to flow, then close faucet.
- Plug the service cord into the grounded fused outlet.
- Let the unit stand for at least 20 minutes.
- While the citric acid solution is cleaning the hot tank, this is a good time to clean the rest of the unit.
- Clean the bottle ring or gasket, plastic baffle and drip receptor with a mild liquid detergent and water. Note: rinse the parts very well to avoid soap from entering the drinking water.
- Inspect the back of the unit for lint or dirt on the wire and tube condenser. If it is dirty, clean it with a non-wire stiff brush or a vacuum cleaner.
- Unplug the service cord
- Using rubber gloves and being cautious of water that may scald, draw water from the hot faucet until the flow ceases. Open the heating tank drain catching the water in a pan or bucket. The water will be discolored. Note: this drain water should immediately be poured down a drain to prevent accidental spilling; this water will stain.
- If sanitizing is required see Sanitizing Instructions
- Pour at least one gallon of bottled water into the cooling reservoir and allow this water to drain out the heating tank drain. Drain all remaining water in the cooling tank through the cold faucet.
- Replace cap or plug or turn the drain valve to a closed position when tank is empty
- Replace side panel
- Replace the top, bottle ring or gasket, and receptor
- Replace the baffle and place a bottle of water on the unit. Open the hot faucet to allow the tank to fill
- Plug the service cord back into the grounded, fused outlet

- After the unit has run for 10 to 15 minutes, draw at least one quart of water from each hot and cold faucet.

Your heating tank should now be clean. If the flow of water or the noisy cycles have not been improved, you should have the unit repaired at an authorized service center.

Cleaning the unit in this manner will not only make the unit run more efficiently, but will make the water taste better.