

Article

Bottled water coolers A word on cleaning

Bottled water is the preferred source of drinking water for many people. Consequently, numerous work places and homes use water from 18 liter bottles inverted on a bottled water cooler. When the bottle runs out another is placed on the cooler, usually by whoever is handy. The cleaning and sanitizing of these bottled water coolers is generally an occasional random happening, and some may be cleaned only once or twice per year. People are generally surprised to learn that Health Canada publishes information concerning the maintenance of bottled water coolers. (http://www.hc-sc.gc.ca/fn-an/securit/facts-faits/bottle_water-eau_embouteillee/faqs_bottle_water-eau_embouteillee_e.html). Often, owners and users of bottled water coolers are more than surprised to see that cleaning and sanitizing interval suggested by Health Canada is actually “AT EACH BOTTLE CHANGE”. Rather frequent and conservative wouldn’t you think?

Well, we have recently completed a project that involved sampling over 40 bottled water coolers for bacterial content of the water as it is dispensed from the coolers. Based on our findings of that project we support the Health Canada suggested sanitizing interval of “every bottle change”. We found that it is indeed very appropriate. The following is an extract from the Health Canada Web Site as referenced above.

How do I maintain the cleanliness of a water cooler?

Cleaning your water cooler: (1)

- Unplug cord from electrical outlet of cooler.
- Remove empty bottle.
- Drain water from stainless steel reservoir(s) through faucet(s).
- Prepare a disinfecting solution by adding one tablespoon (15 ml) household bleach to one Imperial gallon (4.5 L) of water solution. (This solution should not contain less than 100 ppm available chlorine.)

or

- Some companies suggest using one part vinegar to three parts water solution to clean the reservoir of scale before cleaning with bleach. Check your manual.

Note: Other disinfecting solutions may be suitable. Please check with your water cooler supplier.

- Wash reservoir thoroughly with bleach solution and let stand for not less than two minutes (to be effective) and not more than five minutes (to prevent corrosion).
- Drain bleach solution from reservoir through faucet(s).

- Rinse reservoir thoroughly with clean tap water, draining water through faucets, to remove traces of the bleach solution.

Note: Clean your bottled water cooler with every bottle change.

Drip Tray (located under faucets):

- Lift off drip tray.
- Remove the screen and wash both tray and screen in mild detergent.
- Rinse well in clean tap water and replace on cooler.

Replacing Bottle:

- Wash hands with soap and warm water before handling. If you choose to use clean protective gloves (ex. latex), discard or disinfect after each use and prior to reuse. Note : Protective gloves should never replace proper hand washing and hygiene.
- Wipe the top and neck of the new bottle with a paper towel dipped in household bleach solution (1 tablespoon (15 ml) of bleach, 1 gallon (4.5 L) of water). Rubbing alcohol may also be used, but must be completely evaporated before placing the bottle in the cooler
- Remove cap from new bottle.
- Place new bottle on cooler.

1. *Adapted from instructions provided by Ken Orom, Calgary Board of Education, and Ken Reynolds, Calgary Health Services.*

Many bottled water coolers also have air filters for the air that bubbles into the bottle as you withdraw the water. These filters also require regular maintenance.

Our experience with bottled water cooler units that have not been cleaned for some time shows that the sanitizing solutions and soaking time as recommended above do not always fully sanitize the units.

We found some of the tested bottled water coolers continued to show a presence of bacteria in the samples collected shortly after the units had been sanitized as per Health Canada procedures. This indicates that, in these cases, either a slightly stronger sanitizing solution or longer soaking of the sanitizing solution in the cooler internals may be required. Both approaches should be considered.

The sanitizing solutions are made by diluting household bleach. The concentration of chlorine in bleach does decrease as the bleach ages. If the bleach used to make the sanitizing solutions is old then the concentration of the chlorine in the sanitizing solution may be low. Additionally, if the bottled water coolers have not been cleaned for a while, it will take additional time for the sanitizing solution to penetrate and neutralize any bacterial growth that may have accumulated in the cooler internals. Check with the bottled water cooler manufacturer for the maximum strength solutions and soaking times that may be used in your cooler.

The quality of the water dispensed from your bottled water cooler would likely benefit from a structured cooler sanitizing and maintenance program. Such a program could include initial sanitizing of in place coolers, and then, continued maintenance of the coolers to Health Canada recommendations. Other components of such a program could include: defined intervals for changing air filters, monitoring sampling on a defined frequency, procedures to set up a new cooler, identifying each cooler with an ID number, maintaining a maintenance log on each unit, defined responsibilities, and storage procedures for bottled water etc..

As the saying goes “the proof of the pudding is in the eating”. Thus, we recommend that you have the quality of the water as dispensed from your bottled water cooler sampled and tested on a regular basis. Such testing will provide you with verification that your cooler maintenance program is helping to ensure the dispensed water meets the purity standards you expect.

Bottled water is actually considered as a food for regulatory purposes and as with any food it is very important to be scrupulously clean in the storage, handling and dispensing. Bottled water does not as a rule contain any compounds to protect the bacterial quality of the water. Thus it falls to you to ensure your storage, handling and dispensing procedures will provide you with the high quality water you expect from your bottled water cooler. We trust that this article provides some insight in this regard. Enjoy.

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