

Farewell to Plastic Bottles!

Get drinking water straight from the tap

Text: Françoise Ohayon

Thirsty? It doesn't get much easier than grabbing a glass and filling it from the tap. Those of us who have lived north of the Alps are accustomed to drinking tap water, and switching to bottled water in Egypt is a concept to which we had to adjust. An annoying concept, I might add.

Eco-friendliness has only recently become a mainstream concern, but disposable plastic bottles have long been anathema to environmentalists, and for good reason. They are made of petroleum products, a questionable use of this limited and expensive resource, and harmful chemicals are both added and released during their production. Furthermore, the manufacturing, distribution, and recycling or elimination of water bottles consumes energy and contributes to global warming.

On the upside, El Gouna's garbage is not burned or tucked into landfills. As long as empty water bottles are not left to fly off into the desert or sea, where they pose a deadly threat to wildlife—and nobody would even think of throwing them out the car's window, now would they?—they eventually make their way to the recycling factory to be crushed and used in pavement bricks. However this does not offset the negative impacts mentioned earlier.

Not only are water bottles ecologically problematic, procuring and storing bottled water takes time, money, space, and effort. If you are anything like me, positive environmental side effects are only an added bonus to the real incentive to stop drinking bottled water: eliminating the hassle that comes with managing your own beverage supply. From organizing deliveries to storing ugly boxes on the terrace to furiously crushing empty bottles into a more manageable volume, there is simply nothing pleasant about stockpiling H₂O.

If drinking bottled water is unappealing for the reasons mentioned above, drinking contaminated tap water is hardly an attractive alternative. The solution to this conundrum comes in the shape of water filtration systems that can be installed in individual households. El Gouna-based Nile Water Systems is the sole importer for the Middle East of the Bin-X patented ultrafiltration system. Developed by a Danish-Dutch company and manufactured in Holland, it consists of a membrane with a pore size of only 0.03 micrometers that retains all particles and bacteria as well as 99.9% of viruses.

Traditional filtration systems take up a lot of space under the sink, require that chemicals and filters be changed regularly, store a limited amount of clean water in a container, and necessitate the installation of a separate tap. The membrane system, on the other hand, is a fairly compact pipe section that delivers clean water on demand from the regular tap. Its lifetime is virtually limitless and risk-free: an old membrane might get plugged up but will never deliver dirty water.

Niels Højfeldt, director of Nile Water Systems, installed El Gouna's first Bin-X system in his own home seven years ago. "People who only come on vacation will never have to change their filter," he explains, adding "those who use it continually for many years might notice a drop in pressure, which would be a sign that the membrane needs changing." Højfeldt spends approximately eight months per year here, and his system has yet to require any maintenance.

The membrane system might not be suitable everywhere, because unlike traditional filters that remove smells and colors, it has no effect on the taste or smell of chlorine. "This is not a problem in El Gouna," says Højfeldt, "as the quality of the water we get is very good to start with. However, any bad smell or taste

can be removed by adding a carbon filter at a very low extra cost."

Bin-X filters come in various sizes, from the smallest model made for ice-cube machines to industrial-size models for hospitals, hotels, and other public facilities. Private households may choose between a one-outlet membrane installed under the kitchen sink and a whole-house membrane installed on the accommodation unit's main water supply. The latter comes in sizes suitable for small apartments, large villas with three or more bathrooms, and even apartment blocks.

"It is reassuring to have clean water everywhere at home," says Højfeldt, "you can brush your teeth or take your medicine in the bathroom without giving it a second thought." So far, Nile Water Systems has installed approximately a hundred filters in El Gouna; 75 per cent are whole-house models and 25 per cent under the kitchen sink.

For my home I chose the one-outlet model that fits in a kitchen cabinet. The 60-centimeter-long tube containing the filtering membrane was fixed to the wall under the sink and connected between the cold water supply and the mixer, where hot and cold water come together in the tap. The other end of the filter was connected to the sink's drain to flush out any impurities that may block the membrane.

An electrical valve that automatically cleans the membrane every four hours was initially installed, but eventually I deemed it unnecessary and had it removed. While this device is convenient in outside installations, under-the-sink units can easily be flushed manually by turning a small knob whenever a pressure drop indicates that the membrane is clogged. And when I say easily, I mean it: even I can handle it without fumbling

Whether you think green or just want to take the easy route, getting rid of plastic water bottles is the thing to do.

with a complicated instructions manual—or worse, having to call a member of the opposite sex for assistance!

I did wonder, however, whether cold water could be deemed clean if it came out of the same tap as unfiltered hot water. As it turns out, since the mixing occurs immediately before the spout, there is no length of pipe that could possibly hold contaminated water. As a precaution, one can let cold water run for five seconds before using it for drinking, cooking, or cleaning fruits and vegetables. In the case of whole-house models, as the distance between filter and tap is much bigger, it is recommended to let the water run for three to five minutes after the home has been left empty for an extended period of time.

I also wondered whether squeezing water through minuscule pores would decrease pressure at the tap. I was told that the difference, if any, wouldn't be noticeable. I decided to see for myself and tested the output before and after the filter installation. A two-liter jug took 18 seconds to fill before the installation, 28 seconds immediately after the installation, and 23 seconds about a week later, as it takes some time for a new membrane to "open" and dispose of the paraffin that seals and protects it before and until installed. While this is by no means a scientific experiment and doesn't take into account the day-to-day pressure variations that are commonly experienced regardless of the presence of a filter, it convinced me that no significant pressure drop was to be attributed to the membrane.

As for taste (without the carbon filter, which I haven't tested) I noticed a slight change at first, perhaps akin to switching from a familiar brand of bottled water to a new one, but I soon got used to it. In conclusion, I am fully satisfied with my new kitchen addition—or rather with the subtraction of my water boxes. These days, unless I want to impress my guests

with a fancy brand of mineral water imported from France, there is no use for plastic water bottles in my house. May I offer you a glass of Eau de Gouna? //

Nile Water Systems is located in the Hill parking before the entrance of the Moevenpick, ext 32393, phone +2 065 354 9245, info@nile-water.com.

www.nile-water.com