WATER FILTRATION

BIOLOGICAL WATER FILTERS

Squeeze Filter

Don’t trust the tap or bottled water at your location or when you are abroad?

Use the water filtration system in minutes by affixing the 0.1 micron filter directly on to (most threaded) water bottles or to your (household or community) water tap.

This lightweight filter is perfect for travelling.

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Different ways to use our screw on/off filter

Drinking Pouch
Plastic Drinking Bottle
US Army Water Bottle
Hydration Pack
British Army Water Bottle
Your Water Tap (i.e. not connected to municipality water)

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Drinking Pouch

US Army Water Bottle

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Plastic Drinking Bottle

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Hydration Pack

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British Army Water Bottle

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Water Tap
(i.e. not connected to municipality water)

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BIOLOGICAL WATER FILTERS

Biological filter package

Bucket System Water Filter
Mobile Medical Water Purifier
Home / School / Hospital / Office Building Filtration System

All filters/purifiers got a Life Expectancy: ± 4 Million Litres Guaranteed and/or will last for decades.

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Bucket System Water Filter

Use the water filtration system in minutes by fixing the 0.1micron filter to a plastic container. Fill up the bucket with water from a lake, stream, borehole, contaminated well and gravity does the rest.

Mobile Medical Water Purifier

Ideal for use in remote medical clinics. This 0.02 micron purifier removes viruses in addition to all harmful bacteria and protozoa without the use of chemicals. Fix the purifier to a plastic container and gravity does the rest. Turn swamp water into surgical water in seconds.

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Home/School/Hospital/Office Building Filtration System

Clean water for your home, school, hospital, office building, etc. with the new 10” filter. The 10 “filter can be used with household or commercial building pressure (60psi) it can also be used with very low pressures and gravity feed applications.

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Background on the technology

With the technology derived from kidney dialysis, the filter manufacturer worked with a fibre manufacturer to actually improve the hollow fibre membrane technology.
In order to improve both the filtration rates and longevity of the filter, they needed something even more precise and rugged.
The fibre composition had to deliver exactly 0.1 & 0.02 micron filtration most of the time ensuring no bacteria would get through, and that the membranes had to be sturdy enough to withstand backwashing, which allows the filter to be cleaning and reused.

Hollow Fibre Membrane filters are small, portable, easy-to use, reliable, inexpensive, and can last a decade without needing to be replaced. The proprietary water filters are comprised of tiny "U" shaped micro-tubes that allow water to enter into their core through tiny micro-pores. The high number of those tiny tubes and their surface area allows the filter to have one of the fastest flow rates in the world. This high flow rate eliminates the need to store water, reducing the possibility of water contamination after the filtration process.

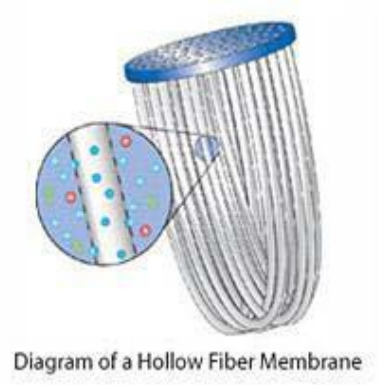

Diagram of a Hollow Fiber Membrane

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Each filter is certified for ABSOLUTE microns; that means there is no pore size larger than 0.1 or 0.02 micron in size. This makes it impossible for harmful bacteria, protozoa, or cysts like E. coli, Giradia, Vibrio cholera and Salmonella typhi (which cause Cholera and Typhoid) to pass through the 0.1 micron biological filter. At 7 log (99.99999%) the filter attains the highest level of filtration available today.

If viruses are an issue, The Purifier – (0.02 micron absolute pores), the first and thus far only portable purification device to physically remove viruses, which it does at a >5.5 log (99.9997%) rate, exceeding EPA and NSF recommendations.

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All filters have been tested by independent and qualified research laboratories according to U.S. EPA standards for water filters, and meet or exceed EPA standards. The revolutionary technology has also been tested and verified by the United Nations, and is currently being used in more than 70 countries around the world.

Summary – The filters remove:

	Waterborne Diseases	EPA Requirement	Exceeds EPA Recommendation	Removal Rate
Purifier / Filter	**Bacteria Which Cause:** I.E.: Cholera, Botulism (Clostridium botulinum), Typhoid (Salmonella typhi), Amoebic Dysentery, *E. coli*, Coliform Bacteria, Streptococcus, Salmonella	99.9999% 6 log	Yes	99.99999% 7 log
Filter	**Protozoan (Cyst):** I.E.: Giardia, Cryptosporidium, Cyclospora	99.9% 3 log	Yes	99.9999% 6 log
Purifier	**Viruses:** I.E.: Hepatitis A (HAV), Poliovirus, Norwalk, Rotavirus, Adenovirus, Hepatitis E (HEV), Coxsackievirus, Echovirus, Reovirus, Astrovirus, Corona Virus (SARS)	99.99% 4 log	Yes	99.9997% 5.5 log

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Filter System Easy to Use

The process to filter water is a simple one. Users collect water from practically any source - a lake, stream, borehole or even a contaminated well. They then drill a hole in any plastic container using the hand-held drill bit that accompanies the filter kit. Once the filter is attached to the container, users fill it up with the collected contaminated water, and then gravity does the rest.

The system will deliver enough safe water daily for a large family to use for drinking ,cooking, cleaning, washing and sharing. Depending on the set up it can decontaminate up to 1,900 litres per day. With proper maintenance (= backwashing only!), the filter will last decades and will never need replacing. When it clogs or slows down, one simply backwashes it with the syringe included with the unit.

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Some reference projects

Afghanistan

U.S. Army Captain Michael Brabner contacted Waves for Water for assistance in bringing potable water to five villages in the Kunar Province of northern Afghanistan where his battalion, the Wolfhounds, are stationed. Though the battalion's first objective is to keep insurgents at bay to protect the local population, Brabner sought additional ways to improve the health of the people. Brabner explained that the Kunar River, which every village is built along, is the only source for water and it's littered with waterborne illnesses that have crippling effects on many in the communities. With its mission to help provide clean water to every single person who needs it, Waves for Water did not hesitate to partner with Captain Brabner to help those in need. Through the partnership, the battalion distributed filters and utilized a translator to teach Afghans how to operate them. The initiative has brought clean water to up to 20,000 people in the Kunar Province.

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Pakistan

The floods that devastated Pakistan in summer 2010 were rated by the United Nations(UN) as the greatest humanitarian crisis that the organization ever faced. The UN expressed concern that aid was not arriving quickly enough, and the World Health Organization reported that 10 million people were forced to drink unsafe water. Waves for Water responded in an effort to help with the human crisis. Within a month, the organization raised funds, shipped water filtration systems, and arrived in Pakistan to find partners to help distribute the filters to those in need. So far, Waves for Water has provided clean drinking water for more than 60,000 people in Pakistan.

Japan

After the April 2011 tsunami in Japan, aid workers from Waves for Water distributed more than 100 filters to those in need. The team targeted small neighbourhoods along the edge of where the tsunami waters stopped. These people had houses that were still standing but had no water, plumbing or electricity. In one case, an elderly woman washing clothes by hand in her driveway, and her daughter, a mother of three younger children, were shown the filter bucket demonstration. The aid workers explained their mission and then offered them a system. The elderly woman immediately started to cry and asked why her? What did they do to deserve this help? It was a touching moment and it validated the team's original intuition about finding pockets of people that, for some reason, were being overlooked. The initiative provided more than 10,000 people in Japan with clean water.

Africa

A bishop who oversees 100 churches in Kenya, Rwanda and Burundi reports that before the filters were used, five to six children would die every month due to water-related diseases. Such cases now have decreased significantly. In addition, the filters save the environment because without the need to cut down trees for fuel to boil dirty water, the carbon footprint and soil erosion are reduced. And, the filters save time, as people do not need to walk miles to a clean water outlet, using whatever water source is close by.