

## Sawyer Filter Technology

With the technology derived from kidney dialysis, Sawyer worked with a fiber manufacturer to actually improve the hollow fiber membrane technology. In order to improve both the filtration rates and longevity of the filter, they needed something even more precise and rugged. The fiber composition had to deliver exactly 0.1 & 0.02 micron filtration 100% of the time to ensure no bacteria would get through, and the membranes had to be sturdy enough to withstand backwashing which allows the filter to be cleaning and reused.

Sawyer's Hollow Fiber 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.

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, Girardia, Vibrio cholerae and Salmonella typhi (which cause Cholera and Typhoid) to pass through the Sawyer PointONE™ biological filter. At 7 log (99.99999%) the filter attains the highest level of filtration available today.

If viruses are an issue, we offer the Point Zero Two 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.

All Sawyer 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. Sawyer's 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.

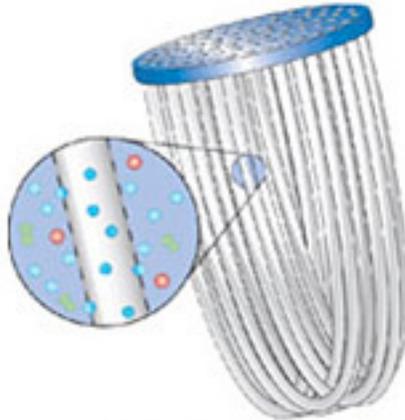


Diagram of a Hollow Fiber Membrane

1

Sawyer's Hollow Fiber Membrane filters

	Waterborne Diseases	EPA Requirement	Exceeds EPA Recommendation	Removal Rate
Purifier ↑ Filter ↓	<b>Bacteria Which Cause:</b> I.E.: Cholera, Botulism ( <i>Clostridium botulinum</i> ), Typhoid ( <i>Salmonella typhi</i> ), Amoebic Dysentery, <i>E. coli</i> , Coliform Bacteria, Streptococcus, Salmonella	99.9999% 6 log	Yes	99.99999% 7 log
	<b>Protozoan (Cyst):</b> I.E.: Giardia, Cryptosporidium, Cyclospora	99.9% 3 log	Yes	99.9999% 6 log
	<b>Viruses:</b> 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

2