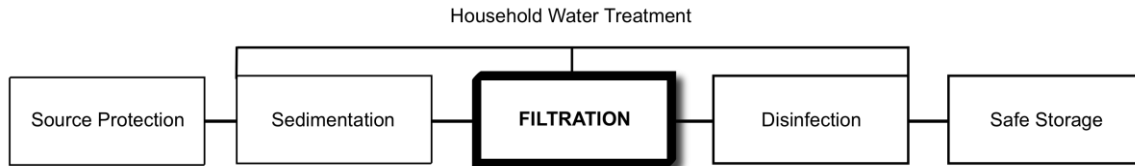


Household Water Treatment and Safe Storage Product Sheet: Sawyer Point One™ Filter

Treatment Type



Product Name: Sawyer Point One™ filter

Manufacturer: Sawyer Products Inc., USA

Product Description:

The Sawyer Point One® filter is a gravity membrane filtration technology that uses hollow fibre membranes to remove pathogens. It has a pore size of 0.1 microns, making it effective for removing bacteria, protozoa and helminths. The Point One® filter does not remove viruses (see Sawyer Point Zero Two Product Sheet for virus removal).

The kit includes a filter, hose, compression fitting, backwash syringe, a hanger for storing the hose, and a hole cutter for attaching the hose to the inlet water container. The kit does not include a container to hold the inlet water or a container to collect the filtered water. The kit is designed to be used with a plastic container, but other types may also work; water storage containers should not be a container that has ever been used to transport chemicals or toxic materials.

The filter membrane is located at the end of the outlet hose. To stop the flow, the hose and filter are raised up to the top of the inlet water bucket and hooked on a hanger (provided) until the next use.

Availability: Available online. Cannot be exported internationally through Sawyer Products Inc. They recommend contacting an international logistic company for shipping outside of North America.

Robustness: The membrane filter doesn't need to be replaced; backwashing using the syringe when the filter clogs is all that is required to restore the flow rate. Water pre-filtration using a cloth and/or settling is recommended for turbid inlet water.

Lifespan: No field data available yet to estimate how long the filter will remain useable.



Sawyer PointOne™ Filter Kit
(Credit: www.sawyer.com)



Sawyer Filter Operation
(Credit: www.sawyer.com)

Household Water Treatment and Safe Storage Product Sheet: Sawyer Point One™ Filter

Approximate Dimensions: Cylindrical filter: length 22 cm, diameter 7 cm.
Plastic tube length: 30 cm (1 foot); other lengths are available.

Approximate Weight: 0.3 kg (0.63 lb)

Output: 46.5-54 litres/hour; 1117 litres/day.
Based on a 1-foot hose attached to a 5-gallon bucket at sea level.
Increasing the hose length, using a larger container, continuously keeping the bucket full will increase flow rate. Flow rate will be lower at higher altitudes.

Costs: Retail US\$60

Maintenance: Need to backwash filter using syringe provided in the kit when flow rate slows down. With relatively clear inlet water, backwashing is recommended every 3,800 litres. If inlet water is extremely turbid, backwashing is recommended every 40 litres or less.



Sawyer PointOne™ Bucket Filter
(Credit: www.sawyer.com/gallery.htm)

Treatment Efficiency

	Bacteria**	Viruses	Protozoa	Helminths	Turbidity	Chemicals
Laboratory	>99.99999% ¹	N/A ²	> 99.999% ³	100% ⁴	N/A	N/A
Field	N/A ⁵	N/A	N/A	N/A	N/A	N/A

N/A: Not available.

¹ Hydreion LLC, 2005. Test bacteria: Klebsiella.

² The Sawyer Point One™ filter does not claim to remove viruses.

³ Hydreion LLC, 2005. Test organisms: Cryptosporidium parvium oocysts and Giardia Lamblia cysts.

⁴ Helminth removal should be equal to or greater than bacteria and protozoa removal based on pathogen size.

⁵ A field project implementation by Give Clean Water shows its applicability in the field. Available at: www.sawyerpointonefilters.com. The results from a field study in Bolivia are being analyzed.

References

Hydreion LLC. (2005). Microbiological Testing of the Sawyer 7/6B Filter. USA. Available at: www.sawyerpointonefilters.com/downloads/MicrobiologicalTest_HydreionLabReport_12-01-2005_76BFilter.pdf

Sawyer Products Inc (2011). Available at: www.sawyerpointonefilters.com. Accessed May 16, 2011.