

Pottery candle filters

- for those who do not have piped water -

as shown at, www.SilverCeramicSystems.com

The household water system shown below was sold in rural Nepal in 2003, as low priced as \$4.00, and this consists of two, 8.0 liter buckets. At top and at bottom, respectively, are the container for contaminated water, and the one for treated water.



The pottery candle system shown above gives 2.0 to 3.0 liters of filtered water per hour. The system is very effective, acceptable to users and low priced. These can be made almost anywhere, using local resources.

More recently the systems have been in use in hundreds of homes in Nairobi, in the Mathare Community, made at the Eastleigh Community Centre. The systems have been sold at what amounts to around US\$8.00.

The candle systems have a flow rate of between 2.0 and 3.0 liters of treated water per hour, with the intention that this should meet the drinking water needs of a family, and these ceramic filters are arguably *state-of-the-art*. They are not only effective, but they are low cost and studies have indicated that low income householders find them to be user friendly and easy to maintain. They are also sustainable in that they can be produced almost anywhere in the world, using local resources.

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Noteworthy is the fact that these filter candles are treated with a very tiny amount of silver, and this is what provides the guarantee of virtual 100% removal of pathogens. Because so little silver is needed per candle, this has little impact on the price of the systems. Low price is especially important in the developing world, where many people live in locations where household income tends to be no more than \$1.00 or \$2.00 per day.

For historical perspective it should be said that the organization Potters for Peace (PFP) began promoting a *filter pot* in the early 1990's. www.pottersforpeace.org. For a number of years filter pot production has been done in many locations, and the systems have been promoted accordingly. Filter pots tend to resemble a flower pot, which contains around 7.0 liters of contaminated water.

As to the use of silver, the Swiss firm, Katadyn initially patented its use in a ceramic filtration medium, back in the 1930s. These days other companies are also manufacturing ceramic candle filters, such as Doulton and British Berkefeld, and these tend to be for the camping and outdoor market. What makes the candle filter shown below somewhat different is that this can be manufactured almost anywhere, using local clays and other available resources.



The pottery candle of the filter system, shown above is 4.5 inches diameter and 5.5 inches in height, and this has a filter wall thickness of 1.0 inch.