



Ceramic Pot Filters: Weapons of Mass Bacterial Destruction

Brought to you, and to millions of users, by Potters for Peace (PFP)



Waterborne Disease



- Diarrhea claims more than 4,000 lives every day
- More than half of diarrhea cases are caused by pathogens in drinking water
- Most victims of waterborne disease are children under age 5
- At any given time, over half of the world's hospital beds are occupied by patients suffering from waterborne disease

Waterborne diseases are preventable!

Solution: Silver-Enhanced Ceramic Pot Filters



Simple.
Affordable.
Effective.



Simple.

- User friendly (kids included)
- Easy maintenance, gravity fed

Affordable.

- Supports local business: Local materials, local potters
- Environmentally friendly (compared to boiling and chemical treatments)
- Costs less than \$0.001 per liter filtered (~US\$23)

Effective.

- Eliminates more than 99.98% bacteria
- Removes turbidity and bad taste, cools water
- Potable water all the time at "point of use"

History

The antimicrobial properties of silver have been known for millennia: Alexander the Great put silver coins in his army's water barrels to prevent disease



Filters like this traditional pumice filter have been used to purify water for centuries

The ceramic pot filter was invented in 1981 by Guatemalan Chemist Fernando Mazariegos



PFP started the first filter factory in Nicaragua in 1998 to help victims of the devastating floods following Hurricane Mitch

Ceramic Pot Filter Production

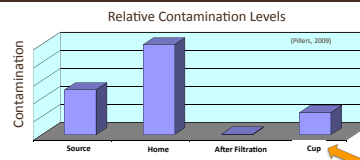
Requirements

- Skilled Potters
- PFP Consultants
- Raw Materials
 - Clay
 - Burnout Material
 - Colloidal Silver
 - Water
- Equipment
 - Filter Press and Molds
 - Kiln
 - Mortar Mixer
 - Sieves
 - Hammermill
 - Safety Equipment

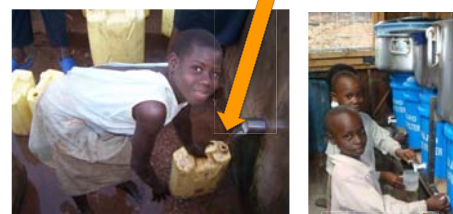
Manufacturing Steps



Importance of "Point-of-Use"



Contamination happens here, and even here!



Point-of-Use methods minimize contamination by dispensing safe drinking water here.

The Potters for Peace Model

PFP does not make, sell or in any way benefit financially from sale of filters. Instead, PFP promotes self-reliance by supporting partners throughout the life of the factory with:

- Information and Resource Gathering, ID of Local Partners
- On-Site Feasibility Studies, Equipment Setup, Kiln Building
- On-site Factory Establishment, Initiation of Filter Production
- Marketing Resources, On-line Follow-up and Technical Support



The PFP model promotes self-reliance

SELF-RELIANCE = SUCCESS

Since 1998, PFP has helped establish filter production at more than 50 sites in approximately 30 countries worldwide



Same Problem, Different Solutions

Finding the best solution requires knowledge of resource availability, culture and local purification needs. There are many good solutions. Cooperation is the best strategy!

Comparison of Purification Methods		
Method	Pros	Cons
Boiling	<ul style="list-style-type: none"> • Bacteria and viruses • Simple • Little instruction needed 	<ul style="list-style-type: none"> • No turbidity removal • Time (heat, cool, collect fuel) • Indoor pollution • Deforestation • Taste
Chlorine / Iodine	<ul style="list-style-type: none"> • Most bacteria and viruses • Simple • Easy to transport 	<ul style="list-style-type: none"> • No turbidity removal • High cost over time • Taste
SODIS	<ul style="list-style-type: none"> • Bacteria and viruses • Renewable energy (sun) • Inexpensive 	<ul style="list-style-type: none"> • Requires low turbidity • Weather dependant • Time to cool and heat
BioSand	<ul style="list-style-type: none"> • Bacteria and turbidity • High flow rate • Long lasting • Produced locally 	<ul style="list-style-type: none"> • Heavy • Complex maintenance • Complex setup • Tunneling may occur
Ceramic Pot Filter	<ul style="list-style-type: none"> • Bacteria and turbidity • User friendly • Cools water • Produced locally • Inexpensive 	<ul style="list-style-type: none"> • Heavy • Fragile • Replace after 2 years • Maintenance required

Recognition for Ceramic Pot Filters

- Ranked #1 Technological Solution by the Rural Water Supply Network at the 6th World Water Forum, Marseilles France (2012)
- Awarded highest score for overall appropriateness in "Smart Disinfection Solutions" -Netherlands Water Partnership (2010)
- Participant at the Smithsonian Museum's Design For The Other Ninety Percent Exhibit, New York, USA, (2007)
- World Bank Market Place Prize, Cambodia and Ghana (2004, 2005)
- Participant at the World Water Forum, Mexico City, Mexico (2005)
- Engineers Without Borders Technology of the Year, USA (2004)
- UN IDEAS 1st Prize Appropriate Technology, Nicaragua (2003)

Memoriam



This work is dedicated to Ron Rivera who, before being brought down by the bite of a mosquito, raised so much awareness, and saved so many lives from the dangers of waterborne disease. We strive to reach Ron's goal of 100 ceramic water filter factories. RON PRESENTE!

Contact Us

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