



FEATURES AND BENEFITS OF SOLAR WATER PASTEURIZERS

FEATURES:

- Disinfects water without electricity, pumps, chemicals, or water pressure
- 99.999% effective in killing disease-causing microorganisms
- Rated a “superior” disinfectant (highest rating) ⁽¹⁾
- Simple low-tech design; ideal for remote areas and developing countries
- Easy to install; no technician needed
- Automatic operation; no technician needed
- Low maintenance; occasional filter cleaning is only regular maintenance
- Long-term reliability—15+ year life
- High-quality materials for durability and long life
- Only one moving part; thermal control valve tested beyond one million cycles
- Wood-burning backup option for rainy climates and operation at night

BENEFITS:

- Prevents illness and death caused by microbiologically contaminated water
- Dramatically improves health of children and adults
- Permanent, long-term solution to contaminated water crisis
- After initial purchase, no on-going expenses
- No electricity needed—can be used anywhere the sun shines
- Low-cost; disinfects water for less than U.S. \$0.00125 (1/8 cent) per liter
- Low per-capita cost: U.S. \$1.50 per person per year
- Low operating cost: no fuel or replacement parts needed
- High reliability for sustainable long-term operation
- Eliminates need to boil water
- Eliminates on-going expenditures for fuel to boil water
- Saves time where wood is gathered to boil water
- Superior alternative to chlorine; no bad taste or health risk
- No replacement supplies or chemicals (such as chlorine) needed
- Benefits local economy by keeping workers healthy
- Can be utilized to generate income as safe drinking water supply business
- Reduces deforestation where wood is used to boil water
- Reduces air pollution where fuel is burned to boil water

Compared to boiling, Solar Water Pasteurizers...

- Eliminate expenditures where fuel is purchased
(money saved can be used for other essential needs)
- Saves time where wood is gathered
(allows for more productive use of time)
- Reduce deforestation where wood is burned
(precious trees can be saved, forests can grow again)
- Reduce air pollution where fuel is burned to boil water
(eliminates smoke from fires)

Compared to chlorine, Solar Water Pasteurizers...

- Are effective on protozoa, worms, and cysts (cryptosporidium and giardia)
(chlorine is rated a “poor” disinfectant for cysts, worms and protozoa) ⁽¹⁾
- Eliminate constant need for supplies
(no on-going expenses; no need for distribution supply lines)
- Eliminate need for dosing and mixing of chemicals by trained operator
(pasteurizers operate automatically without the need for a technician)
- Offer alternative to unhealthy consumption of chemicals
(chlorine has been identified as a possible cause of cancer)
- Offer alternative to unpleasant taste of chemicals
(pasteurization doesn’t change taste of water)

Compared to filters, Solar Water Pasteurizers...

- Are more (99.999%) effective
(filter effectiveness is dependent on quality of construction)
- Are much more reliable
(household filters are prone to failure) ⁽¹⁾
- Don’t require frequent replacement and on-going expense
(long-life; 25+ year operation)
- Operate without water pressure
(minimal gravity flow for Sol*Saver, none required for Family Sol*Saver)

Compared to Ultra Violet (UV), Solar Water Pasteurizers...

- Are designed to operate in remote and rural areas
(electricity is not required)
- Are effective on worms and cysts ⁽¹⁾
(UV is not effective on worms and cysts)
- Are much easier to install and operate
(skilled installers and operators are not required)
- Need much less maintenance
(no bulbs to replace; no pumps to repair)
- Are more effective when water is turbid
(high water clarity is not required)

Compared to sand filters, Solar Water Pasteurizers...

- Eliminate need for skilled labor for construction
(pasteurizer systems are assembled and ready to use)
- Need much less maintenance
(occasional filter cleaning only)

(1) According to “An Overview of Water Disinfection in Developing Countries and the Potential for Solar Thermal Water Pasteurization,” National Renewable Energy Laboratories, Jay Burch & Karen E. Thomas, January 1998.