



INTRODUCTION TO SOLAR WATER PASTEURIZERS

The impact of contaminated drinking water is staggering:

- 80% of all illnesses in the developing world result directly from waterborne pathogens.
- An estimated 4.6 million children and adults die from diarrhea each year. The primary cause of diarrhea is contaminated drinking water.
- 2.5 billion incidents of illness are caused by contaminated water every year.
- 50% of hospitalizations in developing countries result from waterborne disease.
- The leading cause of death for children under the age of five in developing nations is infection from waterborne diseases.
- At any one time, approximately one billion people suffer from diseases contracted by consuming contaminated water.
- 1.2 billion people do not have access to drinking water free from disease-causing microbes. The World Health Organization predicts that by 2025, this number will increase to more than 2 billion.

Microbiologically contaminated water places a tremendous burden on the lives and the health of the world's poorest people and causes needless illness and death where the struggle for life is the hardest. Even within major cities of developing nations, water systems are unsafe and water is boiled to prevent illness.

Boiling contaminated water is an effective preventative measure for those who can afford it, but boiling consumes valuable wood supplies and contributes to deforestation and air pollution. In developing countries the time and energy-consuming task of gathering firewood to boil water only adds to the already heavy burden of work for countless women and children.

Where firewood cannot be gathered, wood or other fuels must be purchased, with the cost often consuming up to 25% of a family's income. Millions of people cannot afford to buy fuel, have no way to disinfect their drinking water and consequently suffer illness and death.

Now there is a simple, effective and long-term solution. Safe Water Systems has invented an innovative and revolutionary technology— called *Solar Water Pasteurizers*—that use the heat of the sun to disinfect drinking water.

Pasteurization is the universally accepted process of killing harmful microorganisms with heat. Pasteurization achieves the same result as boiling, but at a lower temperature. Independent laboratory tests confirm our water pasteurizers are 99.999% effective in destroying disease-causing bacteria, viruses, protozoa and worms.

Safe Water Systems is the world's only commercial manufacturer of *Solar Water Pasteurizers*. Currently installed in 53 countries, our *Solar Water Pasteurizers* are designed specifically for reliable operation in developing, rural and remote areas around the world. They are an ideal choice where conventional water treatment is not available.

Our systems do not require electricity, chemicals, pumps, or water pressure. To make water safe to drink, all you need is sunshine. A backup burner insures operation during inclement weather and at nighttime for additional production.

Key advantages of our *Solar Water Pasteurizers* include simple installation, automatic operation, minimal maintenance costs, and long-term life expectancy (15+ years). No other water treatment system is as easy to use, energy efficient and long lasting. Where microbiological contamination is the problem, our water pasteurizer systems are a simple, long-term solution for safe drinking water.

In addition, our state-of-the-art water disinfection systems have other advantages. Women and children no longer need to spend countless hours searching for scarce wood or other fuels with which to boil contaminated water; they can turn their attention to other essential tasks. And because our Solar Water Pasteurizers use no fuel, they help to prevent deforestation, soil erosion and air pollution.

Clean water greatly improves public health, resulting in a more productive work force. A reduction in money spent for purchasing firewood to boil water creates more available income for purchases of other consumer goods, benefiting not only the consumer, but also the local and national economies.

Safe Water Systems offers three models that address various water disinfection applications:

The **SUNRAY 1000**, our largest model, produces up to 1,000 liters of safe drinking water each sunny day—enough for 500 or more people. Multiple units can easily be installed to provide even larger quantities. This simple and effective system is built to last more than 15 years and with only one moving part, is almost cost-free to maintain. **SUNRAY 1000** is ideal for villages, schools, health clinics, orphanages, hospitals and many other applications.

For modest water needs, the **SUNRAY 30** disinfects up to 30 liters of drinking water each sunny day for a single family or small group. **SUNRAY 30** is portable, durable, and lightweight. No installation is required. Using **SUNRAY 30** is easy. Simply pour water in, set it out in the sun and in 1-1/2 to 2 hours the water will be disinfected.

Safe Water Systems is built on a foundation of service, integrity, reliability and quality. The company's mission is to eliminate needless illness and death, and dramatically improve the quality of life for millions of people by providing the most basic and essential requirement for health—clean drinking water.