

Household Water Treatment and Safe Storage Fact Sheet: Solar Distillation

Effectiveness

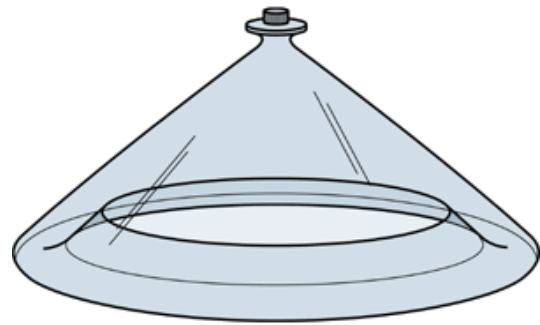
Very Effective For:	Somewhat Effective For:	Not Effective For:
<ul style="list-style-type: none"> • Bacteria • Viruses • Protozoa • Helminths • Turbidity • Chemicals • Salt • Taste, odour, colour 		

How Does it Work?

Solar distillation is an ancient method of using the sun's energy to treat drinking water. Distillation is the process of evaporating water into vapour, and then capturing and cooling the vapour so it condenses back into a liquid. Any contaminants in the water are left behind when the water is evaporated. There are many different designs for solar distillation units (also known as stills).

Effectiveness

- Quality: Very effective in removing pathogens
- Quantity: Depends on the size of still
- Local water: Can be used with any water source



Cone Still

Appropriateness

- Local availability: Can be purchased from a manufacturer or built with local materials
- Time: 6 hours on a sunny day; cannot use when raining
- Operation and maintenance: Simple; some stills are self-cleaning
- Lifespan: 5-10 years depending on the still and the construction quality

Acceptability

- Taste, smell, colour: Some people believe that distilled water tastes flat
- Ease of use: Easy

Cost

- Initial purchase cost: US\$10-400/m² (box still), US\$32 (cone still)
- Operating cost: None