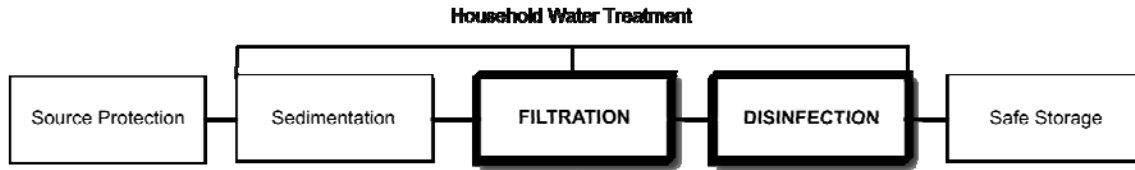


Household Water Treatment and Safe Storage Fact Sheet: Chulli Pasteurization

The Treatment Process



Effectiveness

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

How Does it Work?

The chulli stove system combines two water treatment processes: filtration and pasteurization (a form of disinfection). Water flows first through a rapid sand filter and then into aluminium tubing coiled inside a traditional clay stove (chulli). From the stove, the water flows through heat resistant plastic tubing to an outlet tap, where it is collected in a container. The water is pasteurized during daily cooking. By regulating the flow, the water temperature can be maintained at 70°C; sufficient to kill pathogens as it flows through the coil.

Effectiveness

- Quality: Very effective for removing all types of pathogens; somewhat effective for iron, taste, smell and colour; not effective for chemicals
- Quantity: 60-90 L per day at a flow rate of 0.5 L/min; dependant on cooking time
- Local water: Turbid to clear water

Appropriateness

- Local availability: This device may be built with off-the-shelf parts available throughout most countries. Anyone can be trained locally to build the chulli stove pasteurizer.
- Time: With a flow rate of 0.5 L/min so 1 hour of cooking would produce approximately 30 L of treated water
- Operation and maintenance: Repairs to leaks and tubing as required; Standard maintenance of the chulli stove
- Lifespan: Not yet determined



Acceptability

- Taste, smell, colour: Some improvements, heated water to some tastes flat.
- Ease of use: The system requires no additional inputs for operation after installation; may require maintenance/repair

Cost

- Initial purchase cost: US\$6-7.50
- Operating cost: None