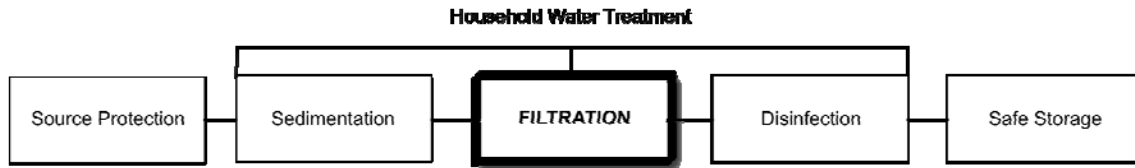


Household Water Treatment and Safe Storage Fact Sheet: Biosand Filter

The Treatment Process

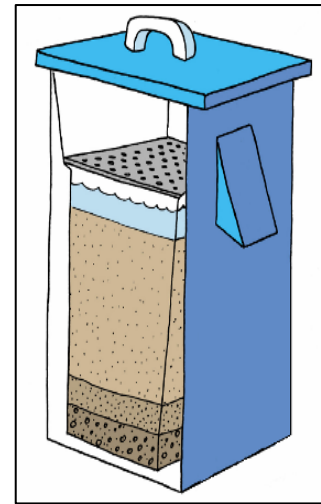


Effectiveness

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

How Does it Work?

A biosand filter is a concrete or plastic box that is filled with layers of sand and gravel. Water is simply poured into the top of the filter and collected in a safe storage container. Pathogens and turbidity are removed by physical and biological processes in the filter sand.



Effectiveness

- Quality: Very effective in removing turbidity and pathogens
- Quantity: Can filter 12-18 litres each batch; recommended to use at least once a day to ensure effective pathogen removal
- Local water: Can be used with any water source, may need to sediment water before filtering

Appropriateness

- Local availability: Concrete filters can be constructed any where in the world; plastic filters are imported from the United States
- Time: Concrete filter flow rate is 0.6 litres/minute; plastic filter flow rate is 0.8 litres/minute
- Operation and maintenance: Simple maintenance to clean sand when the flow rate slows down
- Lifespan: Concrete filters 30+ years; plastic filters 10+ years; lids and diffusers may need to be replaced

Acceptability

- Taste, smell, colour: Usually improved
- Ease of use: Easy for adults; may be difficult for small children to pour water into the filter

Cost

- Initial purchase cost: US\$12-30 for concrete filters; US\$75 for plastic filters
- Operating cost: None