

Hydraid® Biosand Filter

Source Protection	Safe Transportation	Sedimentation	Filtration	Disinfection	Safe Storage
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What is it?

The Hydraid Biosand Filter is a plastic-bodied type of biosand filter (BSF) manufactured by *NativeEnergy*. Biosand filters (BSFs) are columns of finely crushed rock on which microorganisms are living. Water is poured into the top of the column and spends a period of time in contact with the sand. This allows the microorganisms living in the sand to remove pathogens from the water. When a new batch of water is poured in, water added earlier flows out.



Performance

Microbiological Effectiveness:

Parameter	Effectiveness
Bacteria	Effective (>90%)
Viruses	Somewhat Effective (>80%)
Cryptosporidium (Protozoa)	Very Effective (>99%)
Giardia (Protozoa)	Very Effective (>99%)
Helminths	Very Effective*

*Assumption based on pathogen size

Other Parameters

High removal of turbidity. Removes iron. Can be modified to remove arsenic (see Kanchan Filter). Not effective for most other chemical contaminants.

Source Water Requirements

Turbid water (>50 NTU) should be settled or strained before filtering.

Capacity

Treats 15 L per batch and one to four batches per day.

Lifespan

Ten years or more.

Ease of Use & Acceptability

Operation & Maintenance

Users pour water into the filter each day. Simple maintenance is required to clean sand when flow rate slows down.

Repair & Replacement

Lids and diffusers may need replacement before the rest of the filter body.

User Considerations & Preferences

Requires that water to be added every day or two to develop and maintain the microbiological community. Filters should not be moved after installation.

Feasibility

Availability

Available for bulk purchase by partner organizations.

Cost

Price range given by *NativeEnergy*, which uses carbon credits to help finance production and implementation: US\$25–50.

Size & Weight

0.77 m tall by 0.4 m diameter. Weighs 3.6 kg empty and 64 kg filled.

More Information

Details and references: www.hwts.info/products-technologies/07e65cbc/hydraidtm-biosand-filter

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