# Streams

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### INFORMATION

Bacteria and other pathogens in drinking water is a major cause of sickness and diarrhoea. Even if the water from a well, stream or the ground looks clear, bacteria is usually present. Treating water usually needs more work and more resources that many people find difficult adding to daily life.

We have a simple and low-cost solution that can be implemented in households using only a small ceramic wafer and two buckets of water.

We suggest having two different coloured 10-litre buckets, say red and blue.

As red is the universal colour for danger, a red bucket is best used as the treatment bucket. A blue bucket is used for safe drinking water.







The ceramic wafer is small (around 2cm x 4 cm) and light (less than 15 grams). It is durable, and when it is not in use, it has no expiry date. Treatment does not change the taste or smell of water, unlike chemicals such as chlorine.

Treatment does not require any additional labour or fuel. It only needs time. After the initial one-day, the system we recommend can provide bacteria-free water for a 5-person household for every day for one year.

The wafer content is only safe ceramic and silver. When the wafer is placed in water, silver ions are released at a slow rate that is well within WHO guidelines. Silver has known anti-bacterial properties, but it needs time to be effective. That is why one-day of treatment is recommended.



## RECOMMENDED SYSTEM

Start with 2 10-litre buckets, one red and the other blue.

The ceramic wafer goes into the red bucket. Just leave it there for the whole year, and follow these simple rules.

#### Red Bucket

Not for drinking.

First morning, fill with untreated water.



1. Every next morning, pour the treated water from the red bucket into the blue bucket.





- 2. Fill the red bucket again with untreated water.
- 3. Repeat steps 1 & 2 every morning.

Blue Bucket

For drinking





## FAQS

#### The wafer broke!

Put all the bigger pieces in the red bucket. It will still work.

#### The bucket broke!

Get a new one.

#### Ten litres is too much for my house!

Share the clean water with your friends and neighbours.

#### The wafer dropped out!

Pick up the wafer, wash it, and put it back into the red bucket.

#### The wafer dropped into the blue bucket! Wash your hands with soap, pick up the

wafer and put it back into the red bucket.

#### Something dropped into the bucket!

Wash your hands with soap, and remove that thing from the bucket.

#### I'm going away for a few days so nobody will drink the water!

Take the wafer out to dry and store it. When you come home, start a first morning treatment again.

One year has passed!

Get a new wafer and put it into the red bucket. Take out the old wafer. You can crush and throw it away as it is just ceramic. You can also put it in the blue bucket for minimal continuing treatment for a year. Note that no more than one wafer should be in any bucket.

#### There is dirt and leaves in the untreated water!

Get a third bucket. Fill it with the dirty water and allow the water to rest for one day. After one day, pour the rested water into the red bucket, but leaving the dirt and sediment behind. Fill the third bucket again. For the red bucket, start the first one day of treatment and follow the rules above. It may help to pour the dirty water through a cloth to act as a filter.

#### What about chemical or mineral contamination like arsenic?

This solution cannot help with non-biological contamination.