



Once you have filtered the water, it is ready for disinfection. There are several methods of disinfection available – boiling, chemical or solar (listed in order of effectiveness).

Boiling

Boiling is the best method but is not always available. Water should be boiled for at least 1 minute. After boiling allow it to cool and store in clean containers with covers.

Chemical

If you choose this treatment, remember that it takes time for chemicals to work. Allow at least 30 minutes for the chemicals to inactivate the microorganisms.

Bleach

Always use non-scented household bleach. Add two drops for each quart or liter of water.

Alternative Chemicals

- Household iodine (2% solution) can be used. Add 5 drops for each quart or liter. It will leave a taste that many young children will not like.
- Other items that can be used include colloidal silver. Silver concentrations vary depending on the manufacturer and so there is no simple dose for water disinfection.

Solar

A third disinfection technique is to use solar disinfection. In an emergency, fuel can become a precious resource making boiling difficult. You can also run out of chemicals. So solar become an alternative. Unlike chemical, solar will not leave a trace amount of chemical to continue to provide disinfection. Because of this, the water should be used as soon as possible after removing it from the sunlight.

SODIS

Fill clear plastic soda bottles with clear filtered water. The bottles must be clear plastic only, colored plastic will not work. Expose them to direct sunlight for about 5-6 hours. If more than half of the sky is covered with clouds, the bottles must be placed in the sun for two days. The UV radiation from the sun will disinfect the water.

Pasteurization

Water can be disinfected by bringing it to a pasteurization temperature of 160 °F (71 °C) for at least 15 minutes using a solar oven. It is recommended to use a Water Pasteurization Indicator (WAPI) to verify that pasteurization temperatures have been reached. You can find instructions to make a WAPI online.

Disinfect