

How Drinking Water Is Purified LR

How drinking water is purified. Objective, to learn about some of the processes used to purify drinking water. Have you ever thought about how drinking water reaches the taps in your home? We know that rivers and lakes contain water, but this water contains impurities and many disease-causing germs.

So the water is purified in water treatment plants, where it passes through various processes before it's supplied to our homes. Let's learn how water is purified in the water treatment plants. Sedimentation.

The water from the river is pumped into large tanks, where it's allowed to stand undisturbed for a few days. During this time, the heavy insoluble impurities present in the water sink to the bottom of the tank. This process is known as sedimentation.

The water from the top of the tank is then passed into another tank. Here, a chemical known as alum is mixed with the water. Alum forms sticky particles in the water, which attract the light dirt and clay found in water to form large clumps.

This water is allowed to stand undisturbed for a period of time, so that the heavy clumps of alum and impurities sink to the bottom. Filtration. After sedimentation, the water is passed through a clean sand bed.

Here, small-sized fine impurities that are still in the water get trapped and left behind. The clear water then passes into another tank. Chlorination.

In this tank, a small quantity of chlorine gas is added to the water. Chlorine is added to kill the germs present in the water. This water is left in the tank, covered for a period of time.

The water now becomes free of germs and impurities. The purified water is then supplied through underground pipelines to our homes. Sometimes the purified water supplied to our homes may still contain germs.

We can purify this water at home to make it safe for drinking. This can be done by boiling the water for 10 to 15 minutes, by adding chlorine tablets, or by the use of water filters. To summarize, the drinking water supplied to our homes is first purified in water treatment plants.

Here, processes like sedimentation, filtration, and chlorination are carried out to make the water free of impurities and germs. At home, we can purify drinking water by boiling, by adding chlorine tablets to the water, or by the use of water filters.

Summary: How Drinking Water is Purified

The water we get in our **homes** comes from **rivers and lakes**, but this water contains **impurities** and **germs**. It is purified in **water treatment plants** through several processes before it is supplied to homes.

Processes of Water Purification

1. **Sedimentation** – Water is stored in **large tanks** so that **heavy impurities** **sink** to the bottom.
2. **Alum Treatment** – **Alum** is added, forming **sticky clumps** that trap **lighter dirt and clay**, which then settle at the bottom.
3. **Filtration** – The water is passed through a **sand bed**, which removes **fine impurities**.
4. **Chlorination** – **Chlorine gas** is added to kill **germs** and make the water **safe for drinking**.

Purifying Water at Home

Even after treatment, water may still contain **germs**. At home, we can **purify** it by:

- **Boiling for 10 to 15 minutes**
- **Adding chlorine tablets**
- **Using water filters**

These methods ensure **clean and safe drinking water** for consumption.

Quiz: How Drinking Water is Purified

1. What is the first step in the water purification process?

- ☒ a) Sedimentation
- ☐ b) Filtration
- ☐ c) Chlorination
- ☐ d) Boiling

2. Which chemical is added to water to kill germs?

- ☒ a) Chlorine
- ☐ b) Alum
- ☐ c) Salt
- ☐ d) Baking soda

3. How can water be purified at home?

- ☒ a) Boiling, chlorine tablets, and water filters
- ☐ b) Storing in bottles
- ☐ c) Freezing
- ☐ d) Mixing it with fruit juice

4. What is the purpose of adding alum to water during purification?

- ☒ a) To help dirt and clay form clumps and settle
- ☐ b) To kill bacteria
- ☐ c) To make the water cold
- ☐ d) To remove the smell