

The time it takes for a plastic bottle to break down completely

Each year hundreds of billions of plastic bottles are consumed, so how long does it take to decompose them? Researchers have the answer.

Plastic bottles take a long time to decompose to the point that if you want to protect the environment then stop consuming them.

There are currently over 100 billion plastic bottles sold exclusively in the United States. According to the Guardian, millions of bottles of plastic are produced every minute, with about 20,000 bottles sold every second.



According to research by the Ellen Mac Arthur Foundation, between 5 and 13 million tons of plastics are dumped into the sea each year. It is expected that by 2050, the volume of plastics released into the sea will be heavier than fish.

Scientists have found the answer to questions about the time when plastic bottles disappear.

The answer is about 70 to 450 years, depending on the resin. The plastic bottle was invented in 1947 and was expensive until the 1960s, when the material was used extensively by manufacturers. If so far it is not long enough to know how long the plastic is decomposed.



It took hundreds of years to break down plastic bottles.

Instead, scientists have calculated the use of respirometry tests. Testers placed plastic bottles in compost containing many bacteria to facilitate the decomposition of waste. Then the mixture will be breathed and left for several days. In the process of decomposing bottles, bacteria produce CO₂. By measuring the amount of gas released, scientists can estimate how long a plastic bottle breaks down.

According to the results from the experiment, it is possible that the first plastic bottles were produced in 1947, now completely decomposed. Some types of plastic bottles contain up to 450 years, which means that the bottles you buy today will float in the ocean until 2467.

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