

What is a Part Per Billion ?

A part per billion is one part of something in one billion parts of something else - like a grain of salt in a billion grains of sugar

When testing groundwater samples or air samples, scientists measure the amount of chemical in a certain amount of water or air. The results are given in parts per billion (ppb).

Water Samples

Scientists measure how much contaminant is found in a liter of water. Sometimes expressed as micrograms per liter (Fg/l), which is equal to ppb.

Air Samples

Scientists base air measurements on how many molecules of contaminant vapor are present in a billion molecules of air.

Some real-world part per billion comparisons

1 penny in 10 million dollars

1 second in 32 years

1 foot of a trip to the moon

1 blade of grass on a football field

1 drop of water in an Olympic-size swimming pool