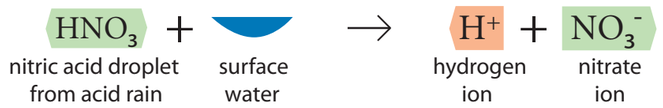
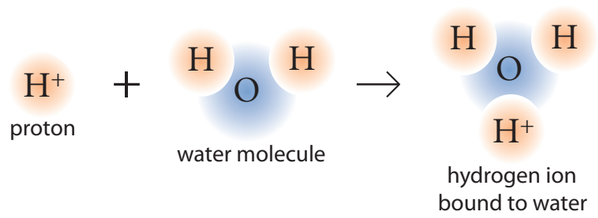
ACIDS & PH

Acids release hydrogen ions in water



A hydrogen ion is a single proton. In water, it is always bound to a water molecule.

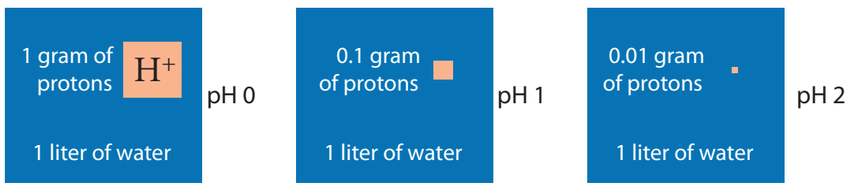


Molecules and ions are counted in moles. One mole is (about) 600,000,000,000,000,000,000,000 (6×10^{23}) molecules.vv

1 gram of protons H^+ = 1 mole of hydrogen ion = 6×10^{23} protons

A hydrogen ion concentration of 1 mole per liter is a 1 molar solution.

pH is a measure of the concentration of hydrogen. A 1 molar solution has a pH of 0.



The pH goes up 1 unit every time the concentration of hydrogen ions goes down 1 unit.

Pure water, which is slightly ionized, has a hydrogen ion concentration of 1/10,000,000 molar and a pH of 7.