

Oxygen / hydrogen isotopes and hydrochemistry

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Water – H₂O

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Oxygen isotopes

- Almost all oxygen atoms have an atomic mass of 16
 - 8 protons + 8 neutrons
- A few oxygen atoms have an atomic mass of 18
 - 8 protons + 10 neutrons

We call this isotope ¹⁶O

We call this isotope ¹⁸O

Hydrogen isotopes

- Almost all hydrogen atoms have an atomic mass of 1
 - 1 lone proton (so sad)
- A few hydrogen atoms have an atomic mass of 2
 - 1 proton + 1 neutron

We call this isotope ¹H

We call this isotope ²H
or **deuterium (D)**

There are thus several different versions of the water molecule

¹H₂¹⁶O mass 18

¹H₂¹⁸O mass 20

¹H²H¹⁶O mass 19



