

Isotope Abundance & Atomic weight

Isotope abundance

Looking at hydrogen we can see the rarity of different occurring isotopes. This is true for all elements so far. If we look at the chart below we will be able to see the isotope abundance for hydrogen. In a fun fact ^2H is known as heavy water and is found in 1 in 10,000 drops of water and when frozen with regular water heavy water will sink to the bottom of the ice cube.

^1H = 95.985% of all hydrogen known to exist on earth

^2H = 0.015% of all hydrogen known to exist on earth

^3H = Trace amounts and too small to count

% of abundance = $\frac{\# \text{ of atoms in a given isotope}}{\text{Total \# of atoms of all isotopes of That element}}$

Atomic weight

Atomic weight is the ratio of the average mass per atom of an element.

Formula

$$\text{Atomic weight} = \frac{\% \text{ abundance of isotope A}}{100} + \frac{\% \text{ abundance of isotope B}}{100}$$