

A_r : mass of 1 atom

M_r : mass of 1 molecule eg. water molecule, O_2

% Composition:

$(A_r \text{ of element} \times \text{number of atoms}) \div M_r$

Mole: amount of substance (6.02×10^{23})

Empirical formula: simplest whole number ratio eg. Carbohydrate can just be CH_2O

Molar volume of gas (dm^3/mol)

Volume of gas at rtp: 24dm^3

Volume of gas at stp: 22.4dm^3

Same volume $\neq$ Same mass

