IGCSE Chemistry 0620 formula sheet

Exams in 2026, 2027 and 2028 · From the official Cambridge syllabus · Extended = Extended (Supplement) only

Moles and masses

Relative formula mass	M_r = sum of the A_r of all atoms in the formula
Amount of substance **Extended**	moles (mol) = mass (g) ÷ molar mass (g/mol)
Number of particles **Extended**	particles = moles × 6.02×10^{23}
Gas volume at r.t.p. **Extended**	volume (dm^3) = moles × 24
Relative atomic mass from isotopes **Extended**	A_r = Σ(isotope mass × % abundance) ÷ 100

Solutions

Concentration (mol/dm^3) **Extended**	concentration = moles ÷ volume (dm^3)
Concentration (g/dm^3)	concentration = mass (g) ÷ volume (dm^3)
Volume conversion	$dm^3 = cm^3 \div 1000$

Percentages

Percentage yield **Extended**	(actual yield ÷ theoretical yield) × 100
Percentage purity **Extended**	(mass of pure substance ÷ mass of impure sample) × 100
Percentage by mass of an element **Extended**	(A_r × number of atoms ÷ M_r) × 100

Energy and chromatography

Enthalpy change from bond energies **Extended**	ΔH = energy to break bonds − energy released making bonds
Exothermic reaction **Extended**	ΔH is negative
R_f value **Extended**	R_f = distance moved by substance ÷ distance moved by solvent

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