

Formula Summary

Chemistry

Every equation a chemistry course expects you to apply, in one place.

The equations that recur across every module.

Quantity	Formula
Moles from mass	$n = m \div M$
Concentration	$c = n \div V$
Ideal gas	$PV = nRT$
Heat energy	$q = mc\Delta T$
Enthalpy	$\Delta H = -q \div n$
Gibbs energy	$\Delta G = \Delta H - T\Delta S$
pH	$\text{pH} = -\log[\text{H}^+]$
Rate	$\text{rate} = k[\text{A}]^m[\text{B}]^n$
Arrhenius	$k = Ae^{(-E_a/RT)}$
Beer-Lambert	$A = \epsilon cl$
Percentage yield	$(\text{actual} \div \text{theoretical}) \times 100$

$R = 8.314 \text{ J K}^{-1} \text{ mol}^{-1}$. Temperature always in kelvin. ΔS in $\text{J K}^{-1} \text{ mol}^{-1}$ while ΔH is in kJ mol^{-1} .