



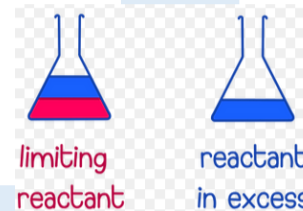
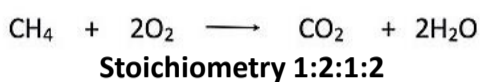
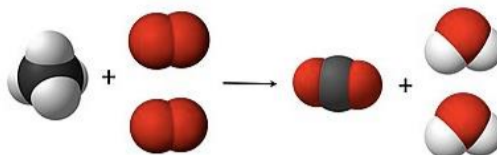
SCAN ME



Final assessment
★
Review of learning

Apply:
Post-16 reacting mass, mole calculations

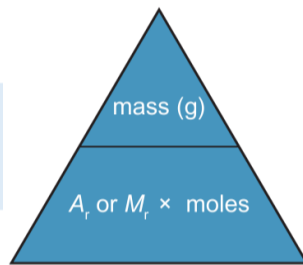
Revision
Retrieval, keyword definitions and equation practice.



Moles-2
Higher tier – working out balanced equations from masses.

Moles-1
Higher tier – Avogadro constant, moles, stoichiometry and working out balanced equations from masses.

The Mole & Avogadro's Constant
 6.022×10^{23}



A_r is the relative atomic mass
 M_r is the relative formula mass

1 mg is 0.001 g and 1 l (1 litre) is the same volume as 1 dm³

Store in a cool dry place.
Excerpt from the mineral water analysis by Laborunion Prof. Höll & Co. GmbH, Bad Esterl dated April 01, 2004
Composition of the characteristic ingredients:
Typical values mg/litre:

Sodium	Na ⁺	13.2
Calcium	Ca ²⁺	29.1
Magnesium	Mg ²⁺	3.9
Chloride	Cl ⁻	31.1
Sulphate	SO ₄ ²⁻	42.7
Nitrate	NO ₃ ⁻	<0.5

The concentration of calcium ions is 29.1 mg/l or 0.0291 g dm⁻³.

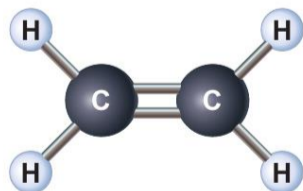
A Mineral water contains dissolved ions.

concentration = $\frac{\text{mass of solute in g}}{\text{volume of solution in dm}^3}$

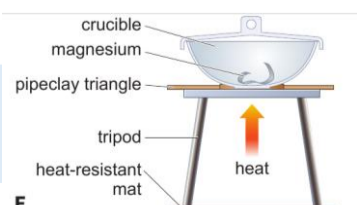
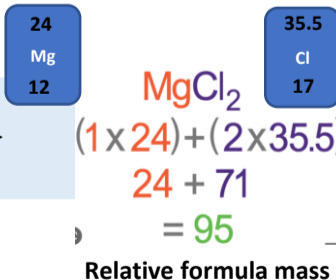
CONSERVATION OF MASS



Conservation of mass
Concentrations in solution, conservation of mass and reacting mass calculations.



Ethene's molecular formula is C₂H₄ but the empirical formula is CH₂



Masses and Empirical formulae
A comparison of molecular formula and empirical formula and calculations of empirical formula.

Retrieve:
C1 3.1 chemical reactions
C1 3.2 Word equations
C1 3.5 Conservation of mass

Keywords

Molecular formula, empirical formula, relative formula mass, concentration, limiting reactant, stoichiometry