

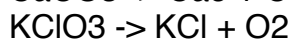
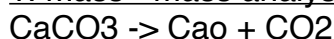
**STOICHIOMETRY**

The word "stoichiometry" itself is derived from two Greek words "stoichion" that means element and "metry" means to measure.

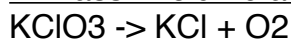
Stoichiometry deals with the calculation of various quantities of reactants or products of a chemical reaction.

**Interpretation of balanced chemical equations:**

Once we get a balanced chemical equation then we can interpret a chemical equation by following ways:

**1. mass - mass analysis:**

→ Q1. 367.5 gram  $\text{KClO}_3$  ( $M = 122.5$ ) when heated. How many gram  $\text{KCl}$  and oxygen is produced.

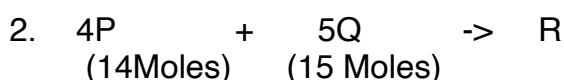
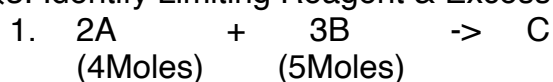
**2. Mass - volume analysis**

→ Q2. 367.5 g  $\text{KClO}_3$  ( $M = 122.5$ ) when heated, how many litres of oxygen gas is produced at STP.

**3. Mole-mole analysis:****Limiting reagent :**

The reactant which is consumed first and limits the amount of product formed in the reaction, is called limiting reagent.

→ Q3. Identify Limiting Reagent & Excess Reagent in given cases



→ Q4.. Volume of  $\text{CO}_2$  obtained at STP by the complete decomposition of 9.85 g of  $\text{BaCO}_3$  is -

(At. wt. of Ba = 137)

1. 2.24 lit
2. 1.135 lit
3. 0.84 lit
4. 0.56 lit

→ Q5. Calculate the mass of residue obtained on strongly heating 2.76 g of  $\text{Ag}_2\text{CO}_3$   
 $\text{Ag}_2\text{CO}_3 \rightarrow 2\text{Ag} + \text{CO}_2 + \text{O}_2$