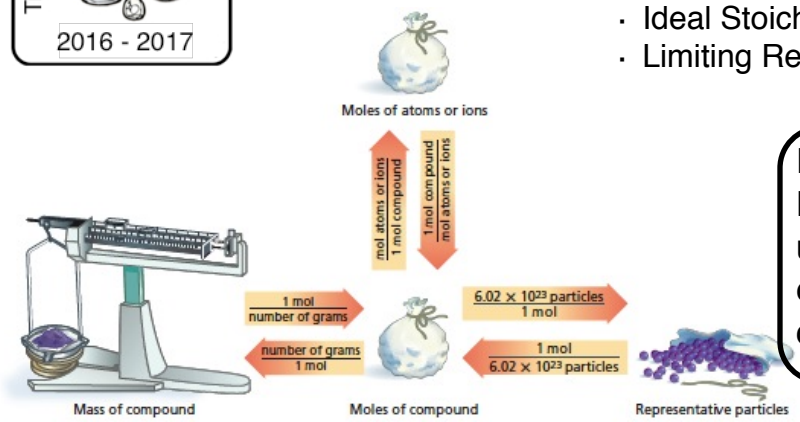
Chemistry
Tigard High
2016 - 2017

Unit 9: Stoichiometry

Text References:

- Introduction to Stoichiometry (9.1)
- Ideal Stoichiometry Calculations (9.2)
- Limiting Reactants and Percent Yield (9.3)



Focus Question:
How can a chemical equation be used to calculate the quantities of elements or compounds involved in a chemical reaction?

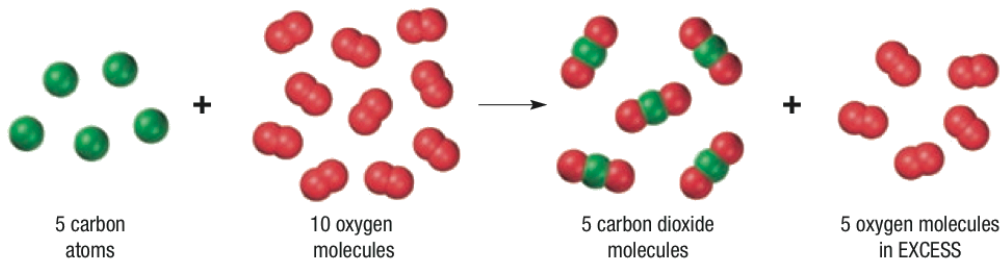
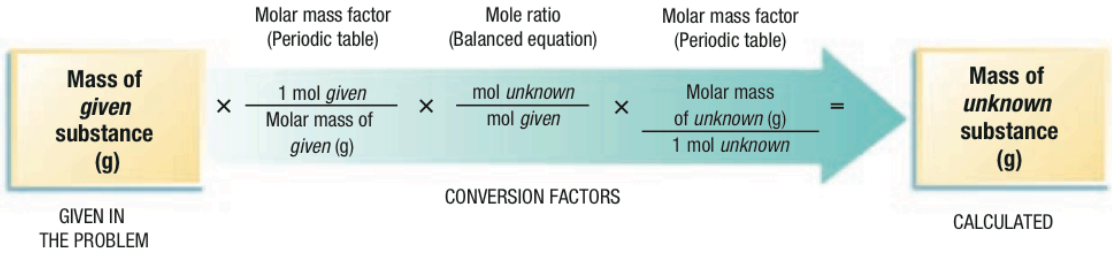
Unit Objectives (what you need to know and be able to do on the test):

1. Define stoichiometry.
2. Write a mole ratio relating two substance in a balanced chemical equation.
3. Calculate the amount in moles of a reactant or product from the amount in moles of a different reactant or product.
4. Calculate the mass of a reactant or product from the mass of a different reactant or product.
5. Given the mass in grams of two reactants, calculate the mass of a product formed, identify the limiting reactant, and determine the amount of the other reactant that is in excess.
6. Distinguish between theoretical yield, actual yield, and percent yield.
7. Calculate the percent yield, given the actual yield and the quantity of a reactant.

Vocabulary:

- actual yield
- aqueous solution
- excess reactant
- limiting reactant
- molar mass
- mole ratio
- percent yield
- stoichiometry
- theoretical yield

Limiting Reactants



Mass-to-Mass Conversions This is a solution plan for problems in which the given quantity is expressed in grams, and the unknown quantity is also expressed in grams.