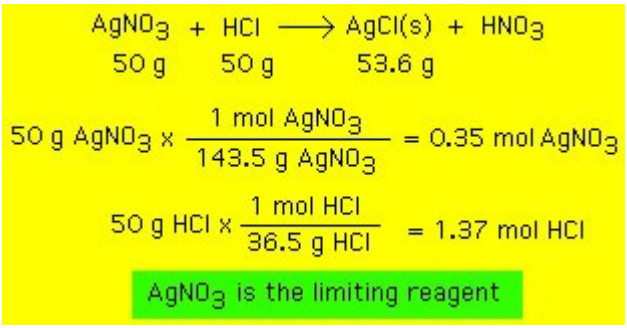
Chemistry
Notes: Ch. 9

Stoichiometry: is the calculation of quantities in chemical reactions

- all stoichiometric calculations involving chemical reactions begin with a balanced equation because mass is conserved in every chemical reaction
- the number and kinds of atoms in the reactants equal the number and kinds of atoms in the products
- the coefficients in a balanced chemical equation tell the relative number of moles of reactants and products

- **limiting reagent:** limits or determines the amount of product that can be formed in a reaction. reaction occurs only until the limiting reagent is used up whenever quantities of two or more reactants are given in a stoichiometry problem, the limiting reagent must be identified.



- **excess reagent:** is the reactant that is not completely used up in a reaction
- **theoretical yield:** is the maximum amount of product that could be formed from given amounts of reactants.
- **actual yield:** the amount of product that actually forms when the reaction is carried out in the laboratory
- **percent yield:** is the ratio of the actual yield to the theoretical yield expressed as a percent and measures the efficiency of the reaction. not normally larger than 100%