

Chapter 4: Stoichiometry

Concepts: mol-to-mol relationships in equations
percent yield

limiting reactant

concentration units: molarity
% by mass

titrations - reactions using molarity
equivalence pt vs. end point

pH of acid solutions

$$\text{pH} = -\log_{10} [\text{H}^+]$$

dilution

Calculations:

stoichiometry: $g \rightarrow \text{mol} \rightarrow \text{mol} \rightarrow g$

$$\text{percent yield} = \frac{\text{actual}}{\text{theoretical}} \times 100$$

limiting reactant

using particle views + calculation

$$\% \text{ by mass} = \frac{g \text{ solute}}{g \text{ solution}} \times 100$$

$$\text{Molarity, } M = \frac{\text{moles solute}}{L \text{ soln}}$$

stoichiometry/titrations using molarity

pH

$$\text{dilution } C_1 V_1 = C_2 V_2$$