

CHEM 115
Winter 2000

Chapter #3: Fundamental Concepts

Appendix: Review of Organic Chemistry (naming organic compounds, alkanes, alkenes, alkynes, isomers, stick models, functional groups, saturated vs unsaturated, aromatics)

Conversion of concentration units: relative vs absolute (ppm, ppb, etc, vs molecules/(cm)³ vs mass/volume (micrograms/(meter)³)

Redox reactions: oxidizing agent, reducing agent, conservation of mass, charge

Combustion(complete) of hydrocarbons to water and carbon dioxide

Role of catalyst to accelerate (forward and backward) reaction rate, no change in the equilibrium

Acid base reactions, the pH scale

Free radical chain reactions (initiation, propagation, termination)

Solubility of gases in water solution (Henry's Law)

Types of radioactivity (alpha, beta, gamma)

Using half-life and doubling times (exponential growth and decay)