

Chapter 11

Reactions in Aqueous Solution II: Calculations

Chapter 11 Outline

- I. Balancing Redox Reactions
- II. Titrations

I. Balancing Redox Reactions

Redox Reaction: Electrons are transferred from one reactant to another

Steps in Balancing a Redox Equation

1. Separate equation into half-reactions.
2. Balance atoms other than H and O
3. Add H_2O to balance O
4. Add H^+ to balance H
5. Add electrons to balance charges
6. Equate loss and gain of electrons with proper coefficients
7. Add half-reactions together and cancel
8. *In acid?* Done.
In base? Add OH^- to each side of the equation to cancel H^+

II. Titrations

Redox Titration

Oxidizing agent
(or reducing agent)

Reducing agent
(or oxidizing agent)

Acid/Base Titration

Base (or acid)

Acid (or base)

