



Acids and Bases



Objectives

- 1) What are the physical and chemical properties of acids and bases?
- 2) What criteria would you use to identify a substance as an acid, base or salt?
- 3) What are the properties of the Arrhenius, Bronsted-Lowry and Lewis models of an acid or base?
- 4) What makes an acid or base weak or strong?
- 5) What does pH and pOH mean?
- 6) How are pH and pOH determined mathematically?
- 7) How is pH and pOH related to the ion product of water?
- 8) What are the products of a neutralization reaction?
- 9) How do you write equations for a neutralization reaction?
- 10) How does the strength of an acid or base compare with the strength of its conjugate base or conjugate acid?

Assignments

- 1) Worksheet p. 11.4 & 11.5 (39 pts)
- 2) p.640 #3-4; p. 649, #19; p. 643, #9[conjugate pairs](14 pts)
- 3) p. 643, #10, p. 674, #107[Lewis acids 7 bases](8 pts)
- 4) p.672, #65-69, [strength](18 pts)
- 5) Worksheet-Strength (24 pts)
- 6) p. 647, #12-13, p. 649, #15,-16 [Polyprotic & strength](20 pts)
- 7) p. 653, 24-26; p. 654, #27-29; p. 655, 30-31[pH & pOH](34pts)
- 8) p.657, #32-34 [Ka](12 pts)
- 9) neutralization worksheet[(pts)
- 10) p. 664, #44-46; p. 673, #92-93[titration](10 pts)
- 11) p. 665, #47-48;p. 673, #91[hydrolysis](14 pts)
 - 12) Quiz – characteristics of acids , bases & salts
 - 13) Quiz – Arrhenius, Bronsted-lowry, Lewis acids, bases, & salts
 - 14) Quiz – Neutralization
 - 15) Quiz – pH 7 pOH
 - 16) Quiz – Titration

Due

Grade

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Note Taking Guide: Episode 1101

Arrhenius Definitions: When reacting with _____ ,

- _____ release _____ ions (ex: _____)
 $\text{HCl}_{(g)} \leftrightarrow \text{H}^+ + \text{Cl}^-$
- _____ release _____ ions (ex: _____)
 $\text{NaOH}_{(s)} \leftrightarrow \text{Na}^+ + \text{OH}^-$
- _____ are _____ compounds that release neither _____ ions nor _____ ions

Solution	Acid (A), Base (B), or Salt (S)	Reacts with Mg (R or NR)	Conductivity (C or NC)
HNO ₃	A		
NaOH	B		
NaCl	S		
H ₂ SO ₄			
HCl			
NH ₄ OH			
KNO ₃			
KOH			
HC ₂ H ₃ O ₂			

OPERATIONAL DEFINITIONS:

ACIDS:

- _____ taste
- react with some _____ to produce _____ gas
- _____
- turn _____ indicators different _____
- react with _____ to produce a _____ and water
- Turns litmus _____.