

4.8 Acid–Base Reactions and Titrations

Arrhenius Definition:

Acid, produces H^+ ions in aqueous solution. Base produces OH^- ions in water

Bronsted Lowry definition:

Acid is a proton donor, Base is a proton acceptor.

Ex. $\text{HNO}_{3(\text{aq})} + \text{NaOH}_{(\text{aq})} \rightarrow \text{NaNO}_{3(\text{aq})} + \text{H}_2\text{O}_{(\text{l})}$

Net ionic: $\text{H}^+_{(\text{aq})} + \text{OH}^-_{(\text{aq})} \rightarrow \text{H}_2\text{O}_{(\text{l})}$

Ex. With a weak acid, classically $\text{HC}_2\text{H}_3\text{O}_2$ molecular form exists in water.

$\text{HC}_2\text{H}_3\text{O}_{2(\text{aq})} + \text{OH}^-_{(\text{aq})} \rightarrow \text{H}_2\text{O}_{(\text{l})} + \text{C}_2\text{H}_3\text{O}_2^-_{(\text{aq})}$

Read and discuss Acid Base Titrations P. 151

Key Words: titrant, equivalence point, indicator, end point

Homework Practice: P. 174 #58, 60, 61, 62, 65, 66, 88, 91, 92