

Acids and Bases

properties

react with metals \rightarrow H_2

react w/ CO_3^{2-} \rightarrow $CO_2 + H_2O$

taste sour

litmus paper \rightarrow red

donate H^+

$pH < 7$

taste bitter

feel slippery

cleaners

litmus paper \rightarrow blue

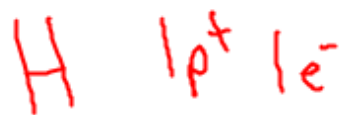
accept H^+

$pH > 7$

Definitions

Bronsted-Lowry

Acids - proton donor
(H^+) loses

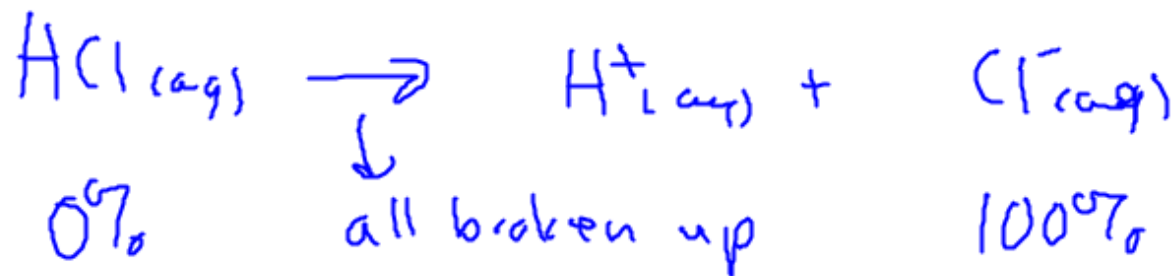


Bases - proton acceptor
(H^+) gains

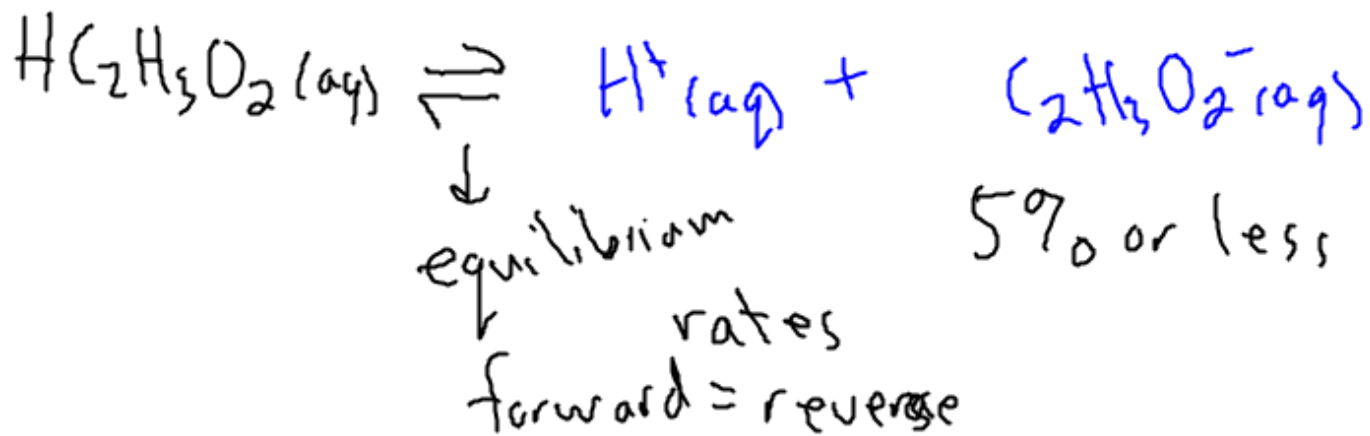
Dissociations - (break up into ions)

Strong Acids - completely dissociate

6- HCl, HBr, HI, HNO₃, H₂SO₄, HClO₄



weak acids - only partially dissociate



Bases - same as acids

Strong Bases - completely dissociate

Grp 1 hydroxides



Weak bases - only partially dissociate



Acids

Donate H^+

Types of Acids

HCl, H_2S

binary - 2 types of Elements

HCl, HNO_3

monoprotic acids

↓
1 H

Bases

accepts H^+

H_2CO_3 , HNO_3

Tertiary - 3 types of elements

H_2CO_3 , H_3PO_4

polyprotic

↓
2 or more H^+ 's

A / B



hint - only can differ by 1 H



differ by

2 H



not same anion