

-gr.16

4.1.4.2 Arrhenius Theory of Acids & Bases

Acid : releases $H^+(aq)$ in water

memorize
expect on
M.C

- reacts with bases
- are electrolytes ... conduct electricity
- react with metals to produce H_2
- turn litmus **Red**
- taste Sour (lemon juice, vinegar)

Base : releases $OH^-(aq)$ in water

- react with acids
- are electrolytes ... conduct electricity
- feel Slippery (soaps)
- turn litmus **Blue**
- taste Bitter (baking soda)

Salt : produced when an acid & base react (by neutralization)

ionic compound \rightarrow metal + non metal

Classify these as : Acid, Base, or salt, or molecular

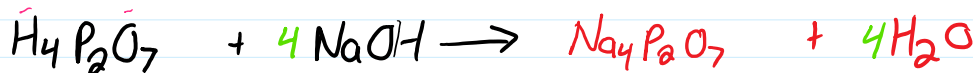
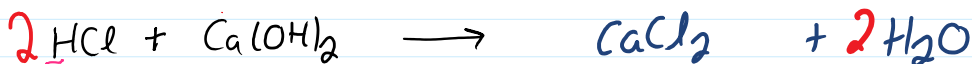
- | | | | | |
|-----------------|---|---------------|---|----------------------------|
| a) KNO_3 | S | e) H_2CO_3 | A | ↳ non metal +
non metal |
| b) $HC_2H_3O_2$ | A | f) Na_2CO_3 | S | |
| c) CH_4 | M | g) $Ba(OH)_2$ | B | |
| d) $LiOH$ | B | h) SO_2 | M | |

Which of the following are properties of acids, bases, both or neither?

- | | | | |
|--|------|---------------------|---------|
| a) conducts electricity in sol ⁿ with water | Both | d) turn litmus red | A |
| b) react with metals to produce H_2 | A | e) taste Sour | A |
| c) make skin feel Slippery | B | f) react with salts | neither |

Acid - Base Neutralization Reactions

Acid + Base \rightarrow Salt + Water Don't forget to Balance



↳ not on your periodic table
... but H is always +1,
so $P_2O_7^{-4}$

IV.2 Common Acids & Bases

Know these : Pgs. 112 - 114

Formula	Name	Common Uses

Formula	Name	Common Uses
H_2SO_4	Sulphuric acid	battery acid
HCl	Hydrochloric acid	muriatic acid
HNO_3	Nitric acid	explosives, fertilizers, dyes
CH_3COOH	Acetic acid	Vinegar
$NaOH, KOH$	— hydroxide	soap, cleaners, lye
NH_3	Ammonia	ammonia & refrigeration gas

H_2SO_4

Summary of Properties :

	Acids	Bases
Ion :	H^+	OH^-
conduct electricity	yes	yes
Litmus :	Red	Blue
Taste :	sour	bitter
React with metal to produce $H_2(g)$	yes	No