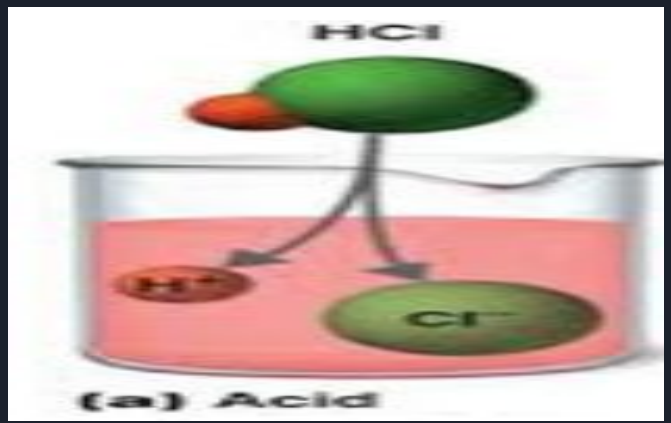
ACIDS BASES AND SALTS

CHAPTER-5

ACIDS

- The term acid is derived from a Latin word ‘acidus’ or ‘acere’, which means sour.
- The most common characteristic is their sour taste.
- An acid is a substance that renders ionizable hydronium ion (H_3O^+) in its aqueous solution.



TYPES OF ACIDS

- Based on their occurrence, they are divided into two types- Natural and mineral acids.

- Natural Acids: These are obtained from natural sources, such as fruits and animal products. For e.g. lactic, citric, and tartaric acid etc.

Lime Juice is Acidic in Nature

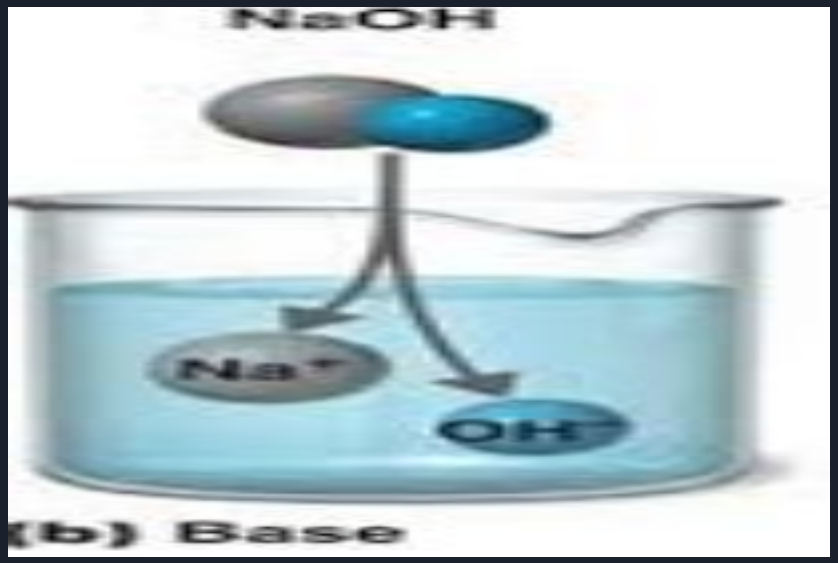
- **Mineral Acids**: Mineral acids are acids prepared from minerals. For example, Hydrochloric acid (HCl), Sulphuric Acid (H_2SO_4), and nitric acid (HNO_3) etc.

USES OF ACIDS

- We use many of these acids in our day to day life-
- Vinegar or acetic acid in the kitchen
- Boric acid for laundry
- Baking soda for the purpose of cooking
- Washing soda for cleaning

BASES

- The most common characteristic of bases is their bitter taste and soapy feel.
- A base is a substance that renders hydroxyl ion(OH^-) in their aqueous solution.



USES OF BASES

Many Cleaning Solutions are Basic in Nature

SALTS

- Salt is an ionic compound.
- Salts are constituted of positively charged ions, known as cations and negatively charged ions, known as anions.
- The nature of the salt is neutral.

PLENARY

Q. Write any three characteristics each of acids and bases.

ASSESSMENT

Q. How are acids helpful in maintaining good health?

Q. Can we tell the acidic and basic nature of all substances by tasting them? Support your answer with a suitable reason and explain.

HCl- ACID

NaOH-BASE

$HCl + NaOH \rightarrow NaCl + H_2O$

Neutralization reaction.

H^+ - Hydrogen ion

$H^+ + H_2O \rightarrow H_3O^+$

HYDRONIUM ION

OH^- - Hydroxyl ion

HYDROXYL ION

$H_2O \rightarrow H^+ + OH^-$