

USEFUL - SALTSSODIUM HYDROXIDE

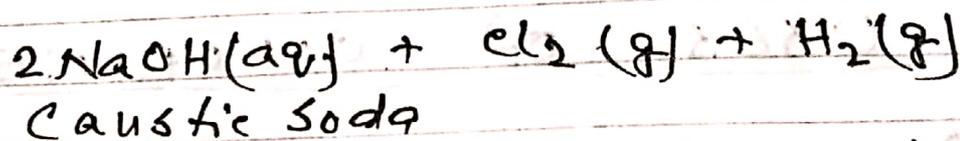
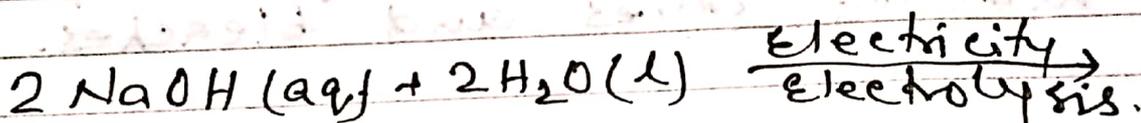
Sodium hydroxide is commonly known as caustic soda. It is a very useful chemical.
 chemical formula - NaOH.

Preparation:-

It is prepared by the electrolysis of concentrated aqueous solution of sodium chloride.

Concentrated aqueous solution of sodium chloride is called brine.

When electricity is passed through concentrated aqueous solution of sodium chloride, it decomposes to form sodium hydroxide, chlorine and hydrogen.



Chlorine gas is produced at the anode (+) and hydrogen gas is produced at cathode (-). Sodium hydroxide is produced near cathode. All the products obtained during electrolysis are collected separately.

Since, chlorine gas and

alkali (NaOH) are produced during electrolysis, so, this process is called chlor-alkali process.

The products sodium ~~hydroxide~~ hydronide, chlorine and hydrogen have a large number of uses.

* USES OF SODIUM HYDROXIDE.

- ① Sodium hydronide is used for making soap and detergents.
- ② It is used for making artificial textile fibres called rayon.
- ③ It is use in the manufacture of paper.
- ④ It is used in the purification of bauxite ore from which aluminium metal is extracted.
- ⑤ It is used in de-greasing metals, oil refining and making dyes and bleaches.

USES OF CHLORINE

- ① Chlorine is used to sterilise drinking water and water in the swimming pools.
- ② It is used for the production of bleaching powder.
- ③ It is used in the production of hydrochloric acid.
- ④ It is used to make plastics

like polyvinyl chloride (PVC)

pesticides, chlorofluoro carbon (CFC), chloroform (CHCl_3), carbon tetrachloride (CCl_4), paints etc.

⑤ It is also used for making solvents for dry cleaning such as trichloroethane ($\text{C}_2\text{H}_3\text{Cl}_3$)

USES OF HYDROGEN

- ① Hydrogen is used in the hydrogenation of oils to obtain solid fats (vegetable ghee).
- ② It is used in the production of hydrochloric acid.
- ③ It is used in making ammonia.
- ④ It is used to make ethanol.
- ⑤ Liquid hydrogen is used as fuel in rockets.

* Hydrogen and chlorine obtained during chlor-alkali process combine to produce hydrochloric acid. It is an important chemical.

Uses of hydrochloric acid.

- ① It is used for cleaning iron sheets before tin plating or galvanisation.
- ② It is used to produce chlorides
- ③ It is used in medicines and cosmetics.
- ④ It is used in textile, dyeing.
- ⑤ It is used in making plastics like PVC.