

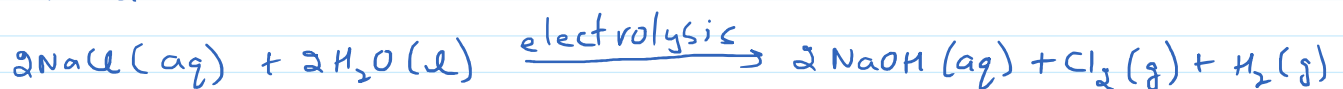
## Chemicals from common salt (NaCl)

### Sodium hydroxide (NaOH)

#### Preparation

Electrolysis of concentrated aqueous solution of NaCl (called brine) gives sodium hydroxide

By products  $H_2$  (at cathode) and  $Cl_2$  (at anode) are also obtained.



This process is called chlor-alkali process.

chlor for chlorine and alkali for NaOH.

$H_2$  uses:

- i) Used as fuel.
- ii) Used in manufacturing of ammonia ( $NH_3$ ), which is used as fertilizers.
- iii) used to margarine.

$Cl_2$  uses:

- i) Used in treatment of drinking water and swimming pools.
- ii) Used in making polyvinylchloride (PVC) pipes.
- iii) Used in making chloro fluoro carbons (CFC's).
- iv) Used in making disinfectants and pesticides.

NaOH uses:

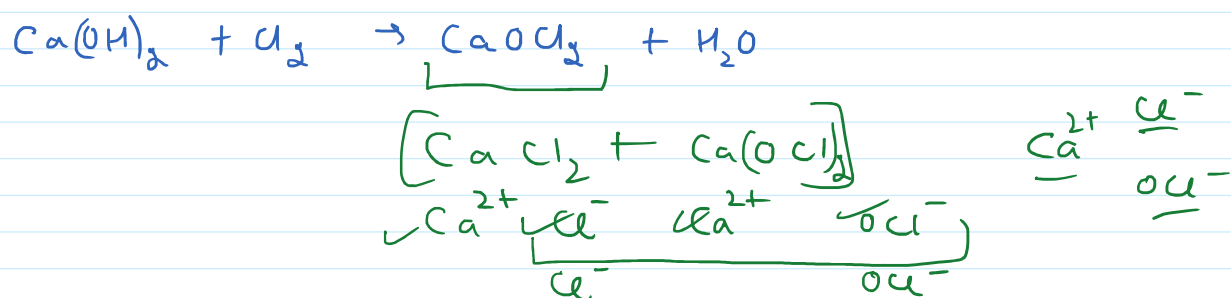
- i) In de-greasing of metals.
- ii) Making soaps and detergents.
- iii) Making paper and artificial fibres.

Uses of NaCl:

- i) For cleaning steel.
- ii) For making ammonium chloride.
- iii) For making medicines and cosmetics.

### Bleaching powder

Bleaching powder is produced by the action of chlorine on dry slaked lime  $\text{Ca(OH)}_2$ . Bleaching powder is represented as  $\text{CaOCl}_2$ , though the actual composition is quite complex.



### Uses:

- i) for bleaching cotton and linen in the textile industry for bleaching woodpulp in paper factories and for bleaching washed clothes in laundry.
- ii) as an oxidising agent in many chemical industries
- iii) for disinfecting drinking water to make it free of germs.