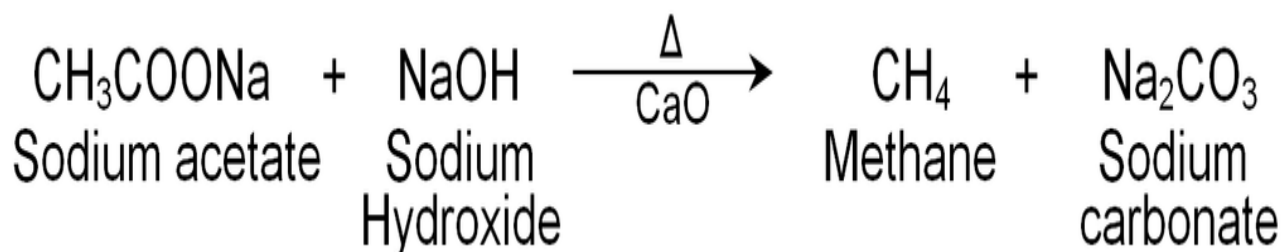


## METHANE :

Methane is the first member of the homologous series of alkanes. Its molecular weight is 16. Methane is also called as marsh gas because methane is formed by the decomposition of animals and plants in the swampy areas. Methane gas is also found in coal mines, gobar gas, bio gas and coal gas.

## PRODUCTION OF METHANE



In the laboratory, methane is formed by heating sodium ethanoate with a mixture of sodium hydroxide and calcium oxide, called soda lime, on heating in the presence of a catalyst, calcium oxide, the -COONa group from sodium ethanoate is replaced by the hydrogen atom from sodium hydroxide, forming methane and sodium hydroxide gets converted into sodium carbonate.

## PROPERTIES :

Some important properties of methane are listed below-

1. The chemical formula of methane is  $\text{CH}_4$ .
2. The molar mass of methane is 16.04g/mol.
3. It is only slightly soluble in water.
4. When methane is burnt, it creates a flame that is slightly pale, slightly luminous and very hot.
5. Methane gas is easy to ignite.
6. Methane is also one of the most important greenhouse gases.

## Uses:

Some popular uses of methane are mentioned below:

1. As methane is an energy powerhouse, it is used in automobiles, ovens as well as water heaters as a fuel.
2. Another popular use of methane is for the generation of electricity.
3. Methane, refined in its liquid form, is used as a rocket fuel as well.
4. Methane is also used in industries as an antifreeze ingredient.
5. Sanitize products consist of some proportion of methane.

