

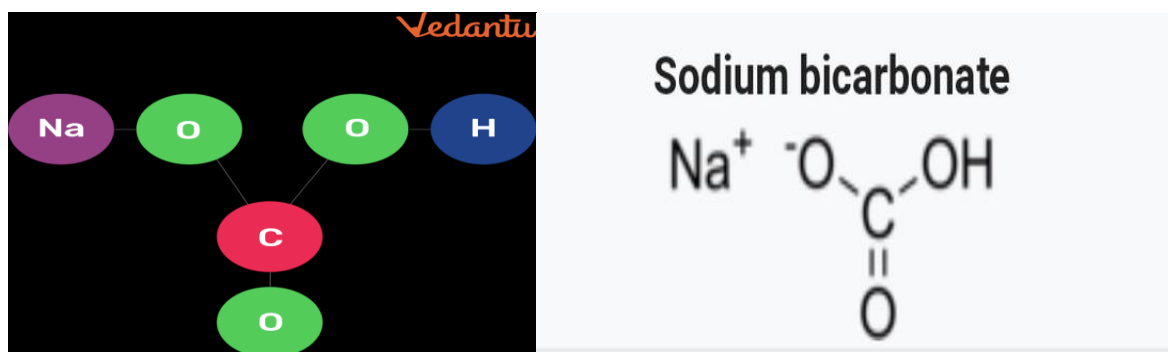
SAI International School
Class-X
Subject_ Chemistry
Topic- Acids, Bases & Salts
Sub Topic- Study of Salts – 3. Baking Soda
Lesson notes

- **STUDY OF SALTS-**

- 3. Baking Soda (Common Name)

OR

- * Chemical Name – Sodium Hydrogen Carbonate
 - * Chemical Formula – NaHCO_3



- * **Preparation of Baking Soda-**

- Baking Soda is prepared by **Solvay's Process-**

In this process –

- i. carbon dioxide,
 - ii. water,
 - iii. ammonia and
 - iv. brine solution in its concentrated form,
- are used as raw materials.

- The important chemical reaction that takes place is:



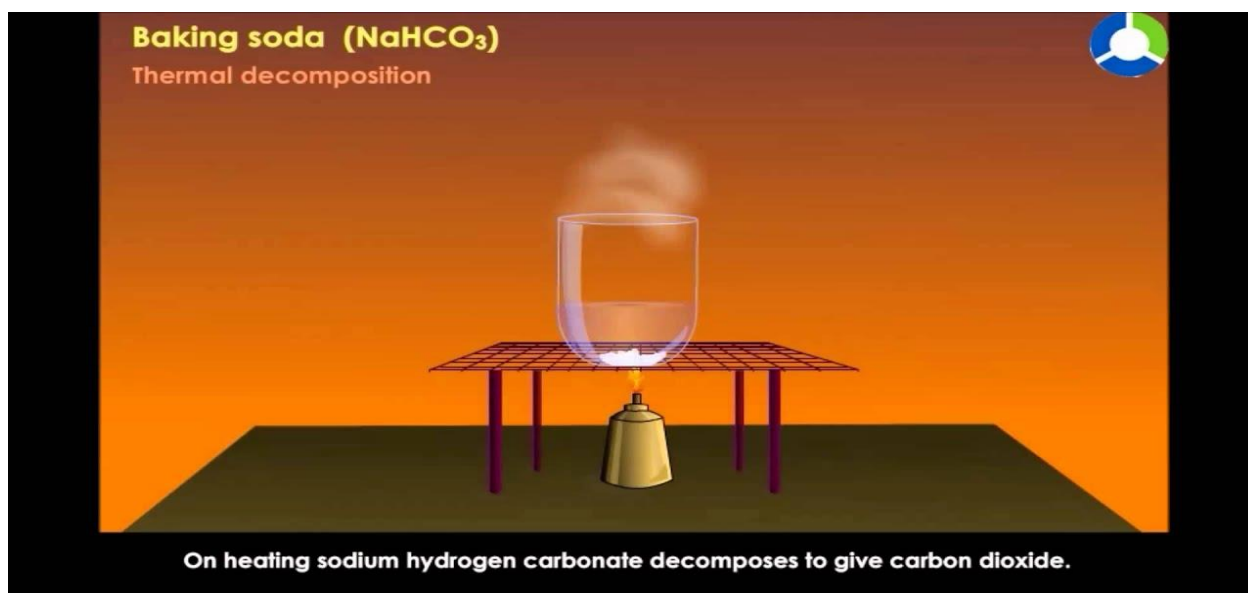
*** Properties of Baking Soda-**

1. It is a white crystalline solid

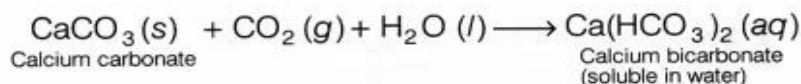
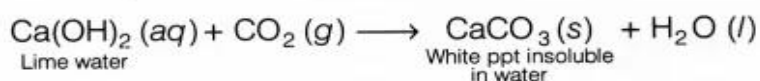


Baking Soda

2. It is **sparingly soluble in water**.
3. It is a **mild, non-corrosive base**.
4. **When sodium hydrogen carbonate is heated, it decomposes to give sodium carbonate with evolution of carbon dioxide gas.**



5. When sodium hydrogen carbonate reacts with an acid it produces the corresponding salt and water with evolution of carbon dioxide gas.



* Uses Of Baking Soda-

1. **Baking soda** is used for **cleaning sinks and basins** because of its cleaning properties.
(alkaline in nature).
2. It helps in **tackling acidity**
(Mild Base).
3. It is also used in **fire extinguishers**, because it manages to **produce a foam** which **helps in dousing flames**.
(Sodium hydrogen carbonate reacts with the acid $\{H_2SO_4\}$ to produce carbon dioxide gas which helps in extinguishing fire) .
4. It is used to **raise the dough** for baking purposes.
(Sodium hydrogen carbonate liberates carbon dioxide gas on being heated, which helps in raising the dough.)
5. Used to prepare **Baking Powder**.
(Sodium hydrogen carbonate is mixed with a mild edible acid like Tartaric Acid to make Baking powder).
 - a. When **Baking soda** is heated, **sodium carbonate** is produced which is a **strong base and bitter in taste**.
Tartaric acid reacts with **sodium carbonate** to form **sodium tartrate** which is **neutral and the bitterness is reduced**.
 - b. Presence of **Tartaric acid** helps in the **release of carbon dioxide gas** which helps in raising the dough.



Preparation of baking powder