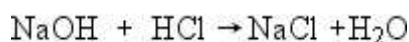


12. Introduction to Acid and Base

- Substances that are sour to taste are acidic in nature and those that are bitter to taste and soapy to touch are basic in nature.
- Chemicals that are used to check acidic or basic nature of substances are called **indicators**. One of the most commonly used indicators is litmus solution (a natural indicator). Acids turn blue litmus paper to red and bases turn red litmus paper to blue.
- Turmeric paste and China rose are also natural indicators. China rose indicator becomes dark pink when an acidic substance is added to it and turns to green when a basic substance is added to it. Turmeric paste remains yellow in acidic solutions but turns to red in basic solutions.
- Substances that are neither acidic nor basic in nature are called neutral substances. Neutral substances do not affect the colour of indicators.

- **Acid – Base reaction**

Acid + Base \rightarrow Salt + Water



- **In water solution**

Acid $\rightarrow \text{H}^+$ ion ; $\text{H}^+ + \text{H}_2\text{O} \rightarrow \text{H}_3\text{O}^+$

Base $\rightarrow \text{OH}^-$ ion

