



STD 10– FIRST BELL 2.0– CHEMISTRY– CLASS-18

Chapter-3

REACTIVITY SERIES AND ELECTROCHEMISTRY

- We use different kinds of batteries to work electronic equipment.
- Different metals used in cells.
- Metals undergo certain chemical reactions. Eg: Rusting of irons and the formation of verdigris on copper.
- Some metals react vigorously and others react sluggishly in the same reaction.
- Gold plated jewellery

Difference in Reactivity of Metals

1. Reaction of metals with hot Water.
2. Reactions of metals with Air.
3. Reaction of metals with Acids.

Reaction of Metal with water:

Experiment:

- Take three beakers having the same quantity of Water. Take pieces of sodium, Magnesium and copper of the same size and drop each one to each beaker. (Same procedure is repeated in hot water).

Observation:

Metal	In cold water	In hot water
Sodium	React vigorously	React vigorously
Magnesium	React slowly	React faster
Copper	Does not react	Does not react

Conclusion:

- The rate of reaction of metals with water is not the same.
- Sodium reacts vigorously with cold and hot water.
- Metals React with water to form Hydrogen gas.
- $2\text{Na} + 2\text{H}_2\text{O} \rightarrow 2\text{NaOH} + \text{H}_2$
- Decreasing order of their reactivity is $\text{Na} > \text{Mg} > \text{Cu}$.

HOME WORK

1. Which gas is produced when Magnesium reacts with hot water?
2. Write down its balanced chemical equation.
3. Which metal does not react with cold water as well as hot water?

Prepared by:

Sakeena T
HST PS
Iringannur HSS Calicut
