SSLC -Chemistry -Class -18 & 19

Unit 3 : Reactivity series and Electro chemistry

Let us find out the difference in reactivity of metals with air, water, dilute acid etc .

Reaction of metals with water

Consider the reactions of Sodium , Magnesium ,and copper with water.

Sodium reacts vigorously with cold water.

Magnesium reacts with hot water.

There is no reaction between copper and water.

We can list the above metals in the decreasing order of their reactivity with water as follows .

Na > Mg > Cu

Reactions of Metals with air

Let us consider the reactions of Sodium , Magnesium , copper ,aluminium and gold with air.

If you take a freshly cut portion of sodium we can observe that the shining fades after sometime. Magnesium ribbon loses its lustre when kept exposed in the air for some days . Aluminium vessels diminishes as time passes by .

In the case of copper vessels, it takes months for the loss of its lustre. Shining of gold doesn't fade even after a long time.

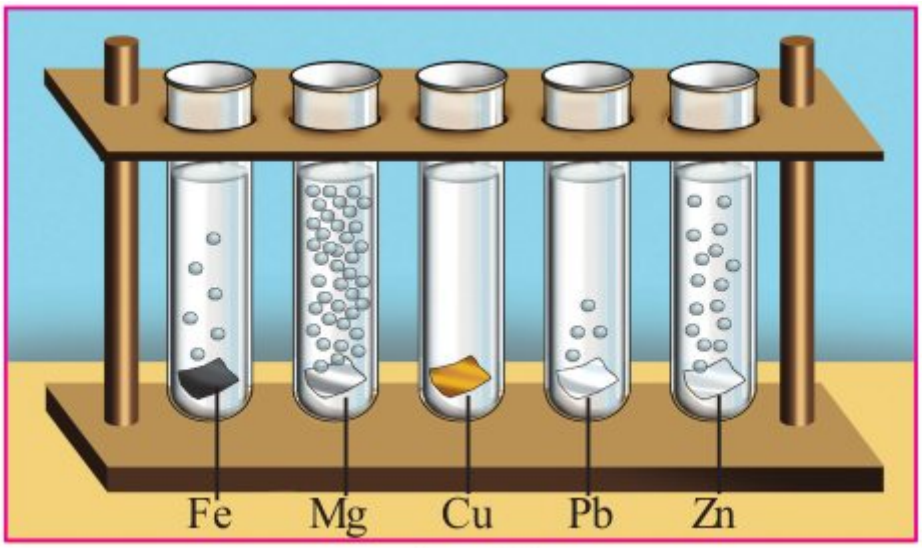
We can list the above metals in the decreasing order of their reactivity with air as follows .

Na > Mg > Al > Cu

Reaction of Metals with Acids

Let us consider the reactions of metals like Mg, Pb, Zn, Fe and Cu with dilute HCl which is given in the picture.

.



We can list the above metals in the decreasing order of their reactivity with dilute acid as follows .

Mg> Zn> Fe > Pb >Cu

Conclusion

It is understood from these experiments that metals differ in their reactivity.

Questions

1.Which metal has the highest reactivity among the following ?

(Cu, Mg , Na , Ag)

2. Arrange the following metals in the decreasing order of their reactivity .

(Mg ,Cu, Fe, , Na, Zn , Al)

3.Why is sodium kept immersed in kerosene ?

4.We do not keep sour food in Aluminium vessels Why ?

****