

## Reactivity Series of Metals

The order of intensity of reactivity is known as reactivity series. Reactivity of element decreases on moving from top to bottom in the given reactivity series.

In the reactivity series, copper, gold, and silver are at the bottom and hence least reactive. These metals are known as noble metals. Potassium is at the top of the series and hence most reactive.

Reactivity of some metals are given in descending order



### Reaction of metals with solution of other metal salts:

Reaction of metals with solution of other metal salt is displacement reaction. In this reaction more reactive metal displace the less reactive metal from its salt.



#### Examples:

Iron displaces copper from copper sulphate solution.

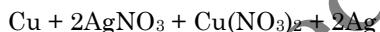


Similarly, aluminium and zinc displace copper from the solution of copper sulphate.



In all the above examples, iron, aluminium and zinc are more reactive than copper. That's why they displace copper from its salt solution.

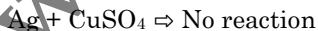
When copper is dipped in the solution of silver nitrate, it displaces silver and forms copper nitrate.



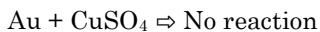
In this reaction copper is more reactive than silver and hence displace silver from silver nitrate solution forming copper nitrate.

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Silver metal does not react with copper sulphate solution. Because silver is less reactive than copper and not able to displace copper from its salt solution.



Similarly, when gold is dipped in the solution of copper nitrate, no reaction takes place. Because copper is more reactive than gold.



In similar way no reaction takes place when copper is dipped in the solution of aluminium nitrate. Because copper is less reactive than aluminium.

