

CHEMISTRY STUDY MATERIALS FOR CLASS 10

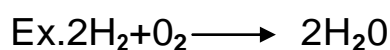
(NCERT Based: Revision of Chapter -01)

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Chemical Reactions and Equations

Chemical Reaction: Such a process in which breaking and making of bonds between different atoms to produce substances of new property is known as chemical reaction.



(Here H_2 and O_2 take part in chemical reaction and produce a product of new property i.e. H_2O .)

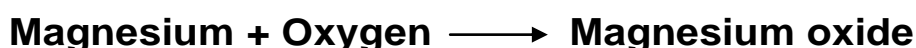
Determination of Chemical Reaction

We should have to determine the chemical reaction has taken place.

- Change in state
- Change in colour
- Evolution of a gas
- Change in temperature.

Above four points are identifications of chemical reaction which indicate that the reaction has taken place.

Chemical Equation:- The presentation of chemical reaction in the form of formulae of reactants and products separated by an arrow marks.

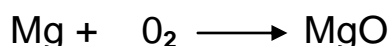


(Reactants)

(Product)

To write the equation in such manner is called as word equation.

Another method to write chemical reaction;



This is symbolic form to write chemical equations.

There are two part of a chemical reaction

Reactants: The substances that take place in chemical change are the reactants. Example from above equation, Mg and O are reactants.

Products: The new substance, formed during the reaction, is the product. Ex. MgO is product, which newer substance produced in reaction.

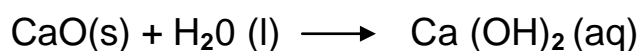
The types of reaction are as follow;

- (1) Combination reaction
- (2) Decomposition reaction
- (3) Displacement reaction
- (4) Double displacement reaction
- (5) Oxidation and reduction reaction

1. Combination Reaction

Are actions in which a single product is formed from two or more reactants are known as a combination reaction?

General form : $A+B \longrightarrow AB$



(Quicklime)

(Slaked lime)

According to definition to comparison with reaction equation we see calcium oxide and water are two reactants which form a single product calcium hydroxide.
