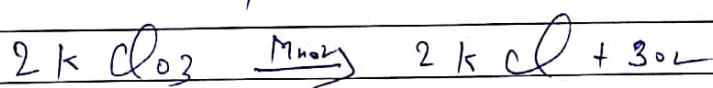


CHARACTERISTICS OF CATALYTIC REACTIONS.

(a) During the course of catalytic reaction catalyst remains unchanged.

As far as quantity as well as composition are concerned both remains unchanged. Some physical changes may occur.



In the above reaction crystalline MnO_2 is added as a catalyst. At the end of

reaction in powder form MnO_2 remains, thus we see that any physical change occurs in

catalyst.

(b) small amount of catalyst is needed for performing the reaction of large amount of reactants. The reason behind this is that catalyst is not used up

during the reaction. one milligram of powder Pt is enough to combine 2.5 liter mixture of H_2 and O_2 . This fact is true for heterogeneous catalysis.

For homogeneous Catalysis it is not absolutely applicable. As we know that during the path of homogeneous Catalysis formation of an intermediate takes place.

Intermediate is formed by Catalyst and reactants, obviously large quantity of Catalyst is needed for feasibility of

reactions. Another example in this regard is INVERSION OF SUGAR. In this reaction rate is proportional to the conc. of H^+ ion.

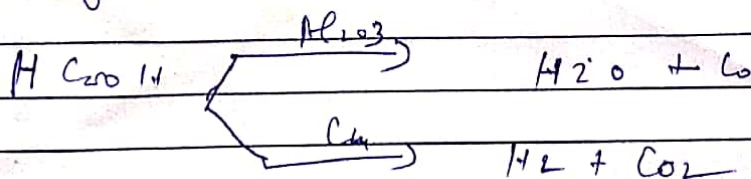
thus we see that in ^{this} case also quantity of Catalyst in ample amount is needed.

(c) Catalyst does not alter the state of equilibrium.


(d) Catalyst cannot start the reaction it only accelerates the reaction.

(e) Catalyst are specific in nature.

This fact becomes more clear as follows.



we see that reactant is same but different

Catalyst gives diff. products.  Officer