PRESENT WORK

Subsequent to the pioneering work by Taube and coworkers on induced electron transfer by equivalent oxidants in Pentaamminecobalt(III) complexes with oxidisable ligands, research activity in this field has come into prominence. Mn(III)acetate induced electron transfer in Pentaamminecobalt(III) complexes of α-amino acid seems to involve nearly synchronous C-C fission and reduction at Cobalt(III) centre. From the yield of Cobalt(II), CO$_2$ and C-C fission products, the nature of reaction intermediate and reaction paths have been understood. As several mechanistic routed have been proposed for Mn(III)acetate of α-amino acids in the present work on Mn(III) acetate induced electron transfer in Pentaamminecobalt(III) complexes of α-amino acids from the reaction at the cobalt(III) center yield of C-C cleavage products a suitable mechanistic scheme can be envisaged. To lend support for the mechanism proposed under identical conditions Mn(III)acetate oxidation of Co(III) bound and unbound ligands in Micellar medium can be undertaken.

The present work on Mn(III)acetate, Mn(III)perchlorate and Mn(IV)heteropolyanion oxidation of Pentaamminecobalt(III) complexes of α-amino acids in micellar medium makes use of induced electron transfer to evidence the formation of Mn(III). An extensive survey of literature that micellar catalyzed Pentaamminecobalt(III) complexes of α-amino acids has not been investigated especially from the kinetic and mechanistic points of view. Therefore we have proposed to study the influence of both anionic and cationic detergents on the rate of Pentaamminecobalt(III) complexes of α-amino acids on Co(III) complexes.

The present work includes Mn(III)perchlorate oxidation included electron transfer on Pentaamminecobalt(III) complexes of α-amino acids in micellar medium
has been proposed to study the nature of the reaction intermediate, mode of electron transfer reactions.

Hence the present study on the Mn(III)acetate, Mn(III)perchlorate and Mn(IV)heteropolyanion oxidation of Pentaamminecobalt(III) complexes of α-amino acids in micellar medium of unbound ligands also has been undertaken. The present work includes Mn(III)acetate, Mn(III)perchlorate and Mn(IV)heteropolyanion oxidation of free ligands in micellar medium makes use of induced electron transfer to evidence the formation of C-C cleavage.

Hence the present work study on kinetics of electron-transfer between Mn(III)acetate, Mn(III)perchlorate and Mn(IV)heteropolyanion oxidation of Pentaamminecobalt(III) complexes of α-amino acids-surfactant medium. The investigation of Mn(III) complex oxidations may therefore bring forth a fascinating comparison of mechanisms proposed for redox reactions in biological systems.