

**Conductometric Studies On Micellar Solubilization Of Acetic Acid In Triton X 100
Aqueous Medium****Alka Tiwari , Sunita Singh , Archana Bajpai, Sandhya Rani Panda, S.K. Chatterjee**

Govt. D.B. Girls P.G.College,Raipur(C.G.) India

Govt. O.F.K. College, Jabalpur (M.P.) India

Mats Univercity Raipur (C.G.) India

N. R. M. Govt. Girls' College, Dhamtari (C.G.) India

Abstract : The CMC Value of Triton X 100 first increases with the increase in the concentration of acetic acid at 305 K & at 310 K, but it gradually decreases at temperatures of 315 & 320 K. This observation suggests that the solubilisation of acetic acid can be made at a higher temperature which is suitable for the micellisation and solubilisation.

Key words : - CMC, Micellisation , Solubilization, Acetic acid .

Introduction : *Surfactants* (tensides) are organic substances, which significantly decrease the surface tension of water at relatively low concentrations, are at least partially water soluble. Because surfactants are adsorbed mainly on the surface of the solution, creating a thin monolayer, they are called surface active substances. When dissolving them, after they reach a certain value of concentration, molecules or ions of surfactants begin to associate and to organize themselves into more complex units, also called micelles. The characteristic concentration value, where the association process begins, is called the *critical micelle concentration* and it is labeled with symbol c_c or abbreviation CMC. The CMC is one of the most useful physicochemical characteristics of many biologically active substances . From the chemical point of view, surfactants are mostly low-molecular compounds, so when dissolved, they form the true solutions in concentration ranges below the CMC. Micelles are aggregates of a larger number of simple molecules or ions of surfactants (e.g. several dozens), so the resulting size of such structures is in the colloidal range. For this reason the micelle solutions of surfactants are regarded as association colloids. The effect of acetic acid on the self association processes of non-ionic surfactant and hence on the properties of the micelles formed has been investigated for several systems using a variety of techniques . The behavior of Triton X 100 micelles in the presence of acetic acid has been extensively investigated .

Triton X 100 is a type of nonionic surfactant, molecular formula $C_{34}H_{62}O_{11}$, molecular weight -646.86, CAS No:9002-93-1 exists as a liquid in normal physical state.



