

# Effect of Alkanol+ Water Wystems on Nonionic Surfactant (Tween-20) in Terms of CMC and Surface Pressure

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## ABSTRACT

The paper deals the study of nonionic surfactants (Tween-20) using surface tension method. The CMC values for T-20 have been obtained from  $\gamma$  vs.  $\log C$  plots. These plots show a linear trend in the surface tension values which is followed by almost constant values with increasing concentration of surfactant after CMC. The surface pressure ( $\Pi$ ) values for each system have been derived by equation ( $\Pi = \gamma_0 - \gamma$ ). The constant values of  $\Pi$  at CMC referred as  $\Pi_{CMC}$  have also been obtained. The variation of  $\Pi_{CMC}$  values with alkanol (methanol, propanol-1, butanol-1, t-butanol) concentration has been noticed. Attempts have also been made to express the effectiveness of T-20 in different alkanol+water systems in terms of  $C_{\Pi=20}$  and  $l_{C20}$  values, i.e.  $C_{\Pi=20}$  concentration of T-20 which reduces the surface pressure by 20  $\text{dyne cm}^{-1}$  has been evaluated by the plots of  $\Pi$  vs.  $C$  of T-20 for different alkanol+water systems and  $C_{\Pi=20}$  values are then used to calculate  $l_{C20}$  values

**Key Words:** Nonionic surfactants, Tween-20, CMC, Surface Pressure.