



Controlled Release Society Indian Chapter

One Day National Seminar on

Translational Research: From Bench to Bedside

Sunday, 17th November, 2019

SOUVENIR & ABSTRACT BOOK

Organized by -

All Pharmacy Colleges

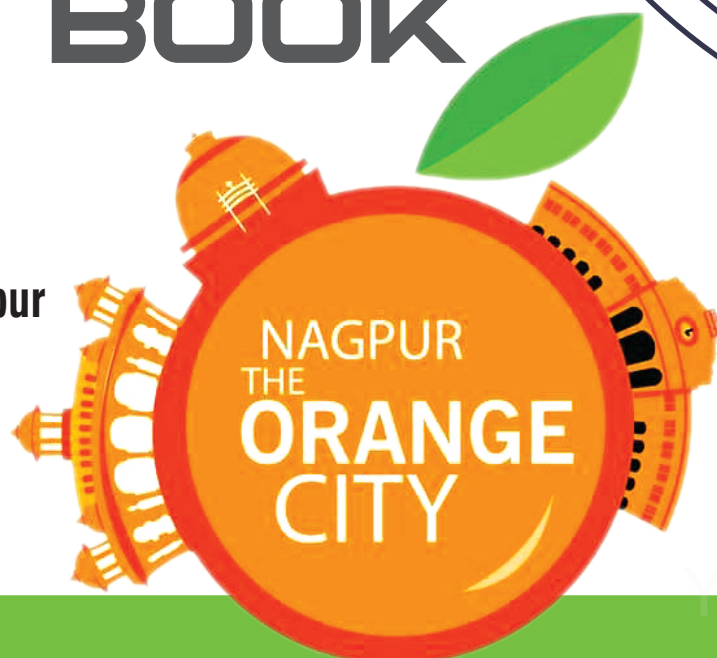
Affiliated to R.T.M. Nagpur University, Nagpur

Venue :

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Ramdaspath,

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EFFECT OF SURFACTANT AND ELECTROLYTES ON CRITICAL MICELLE CONCENTRATION

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Abstract:

Aim: To check the effect of surfactant and electrolytes on critical micelle concentration. **Objective:** To determine the influence of anionic surfactant on the micelle behaviour by conductivity measurement and surface tension with increase in concentration of electrolyte. **Methodology:** The surface tension of surfactant solution in water was measured by drop weighed method using a modified stalagmometer. By this, not only the formation of drops of uniform shape and size ensured but also drop were allowed to break under their own weight. Specific conductivity was measured with a digital conductivity meter using a dip-type cell in the temperature range 293.15-333.15 K. **Result and Discussion:** The critical micelle concentration (CMC) of sodium lauryl sulphate was determined by using method of surface tension and conductivity. Once the amount of SLS solution added into the aqueous solution is equal to the CMC, the first micelle starts to form spontaneously in the solution. In the presence of the anionic surfactant and electrolyte lowering the CMC but decrease the surface tension of the surfactant. **Conclusion:** CMC decreases with the addition of electrolytes, on the addition of electrolytes surface tension value was decreased. The value so obtained shows the decrease in CMC with the increase in electrolyte concentration and approaches to a constant value. In the presence of the anionic surfactant and electrolyte lowering the CMC but decrease the surface tension of the surfactant.

Keywords

Conductometer, surface tension, sodium lauryl sulphate, critical micelle concentration.

