

Micropolarity of normal micellar interior associated with the exchange of pentanol

ABSTRACT

The micropolarity of normal micellar interior of ionic surfactants, sodium dodecyl sulphate (SDS) and cetyltrimethylammonium bromide (CTAB), above critical micelle concentration, associated with the addition of pentanol (or pentanol/hydrocarbon 50:50 wt/wt) were determined by means of fluorescent probe, pyrene. The results showed a decrease in the ratio of the intensity pyrene emission at higher pentanol content, suggesting a lower micropolarity of the micellar interior at increased amount of pentanol. The micropolarity of the micellar interior with CTAB was, however, found to be higher than the corresponding one with SDS. A transition in the micellar shape was also observed in both of the ionic surfactant systems.

Keyword: Micropolarity; Pentanol; Pyrene; Micellar interior