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Physico-Chemical Investigations of Mixed Micelles of Cationic Gemini and Conventional Surfactants: a Conductometric Study

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Abstract

The interaction of cationic gemini and cationic conventional surfactants by conductivity was systematically overviewed, paying attention to synergism observed in micellization. These mixed systems were found to show remarkable synergism in micelle formation. The experimental critical micelle concentration values being lower than the value predicted by ideal solution theory indicate that the mixed micellization is due to attractive interaction between the two components.

Gemini/conventional systems form mixed micelle due to attractive interactions (negative beta values). The values of micellar mole fraction of constituent 1 (X (1)) in surfactant mixtures are more than in the ideal state (X (1) (ideal)), which means that, the mixed micelles are rich in conventional surfactants in comparison to that in the ideal state.

Keywords

Author Keywords: Mixed surfactant systems; Conventional surfactants; Gemini surfactants; Interaction parameters; Synergism; Regular solution theory

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