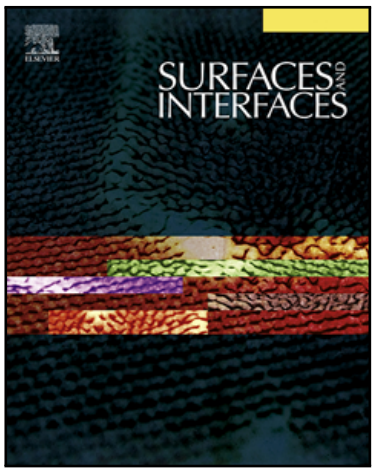

Effect of ionic and nonionic surfactants on the phase behaviour and physicochemical characteristics of pseudoternary systems involving polyoxyethylene(20)sorbitan monooleate

Padmini Suna , Pramila K. Misra

PII: S2468-0230(17)30116-5
DOI: 10.1016/j.surfin.2017.10.002
Reference: SURFIN 148

To appear in: *Surfaces and Interfaces*

Received date: 4 May 2017
Revised date: 3 October 2017
Accepted date: 11 October 2017

Please cite this article as: Padmini Suna , Pramila K. Misra , Effect of ionic and nonionic surfactants on the phase behaviour and physicochemical characteristics of pseudoternary systems involving polyoxyethylene(20)sorbitan monooleate, *Surfaces and Interfaces* (2017), doi: 10.1016/j.surfin.2017.10.002

Highlights

- The microemulsion formed from Tween-80 alone and its mixture with Tween-20, CTAB or SDS were investigated.
- Significant changes in physicochemical properties of the mixed microemulsion were observed in comparison to the single surfactant microemulsion.
- In mixed systems the increase in compatibility of hydrocarbon chains and the decrease in residual surface charge were envisaged.
- The DLS studies revealed the decrease in size and increase of the surface charge of microdroplet on using surfactant mixture.
- The pyrene experienced a more nonpolar environment in the mixed microemulsion than aqueous micelles as divulged from fluorescence studies.