Effect of salts on micellization and clouding behavior of Pluronic F108 in aqueous solution using Trypan blue dye

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PII: S2468-0230(18)30066-X
DOI: 10.1016/j.surfin.2018.04.001
Reference: SURFIN 191

To appear in: *Surfaces and Interfaces*

Received date: 4 February 2018
Revised date: 28 March 2018
Accepted date: 8 April 2018

Please cite this article as: M. Senthil kumar , Sasmita Dash , Effect of salts on micellization and clouding behavior of Pluronic F108 in aqueous solution using Trypan blue dye, *Surfaces and Interfaces* (2018), doi: 10.1016/j.surfin.2018.04.001

Effect of salts on micellization and clouding behavior of Pluronic F108 in aqueous solution using Trypan blue dye

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Abstract

Effect of Chloride, Nitrate, Bromide and Iodide anions of Potassium on the critical micellar concentration of a non-ionic surfactant Pluronic F108 was determined by using UV-visible spectroscopy. Dye-micellization method was adopted using the diazo dye, trypan blue. The influence of the above mentioned salts on the surfactant structures, concentration and working experimental condition at the cmc were evaluated and discussed. The micellization was observed to occur at lower concentration in presence of the above salts. The influence of the above salts on cmc was characterized using UV- spectrophotometry, fluorimetry, dynamic light scattering, flourescence lifetime and cloud point studies. It was noticed that the salts affect the aggregation process consistent with the Hofmeister series with the Chloride, the Nitrate, the Bromide and the Iodide ions coming in decreasing order. Trypan blue has