Available online at **www.joac.info**

ISSN: 2278-1862

Journal of Applicable Chemistry

2014, 3 (3): 1099-1103

(International Peer Reviewed Journal)

Analysis of Spectral Behaviour of 2,3-Diaminonaphthalene in Micellar Surfactant Solution by Spectrofuoremetry

Sunil Kumar Jangir* and Seema Acharya

*Department of Chemistry, Jai Narain Vyas University, Jodhpur (Raj.) **INDIA**

Email: sjinorganic@gmail.com

Accepted on 6th April 2014

ABSTRACT

2,3-Diaminonaphthalene(DAN) is widely used chemical in biomedical and forensic sciences. Micellar solubilization of 2,3-diaminonaphthalene in non-ionic and ionic surfactants heteromicroenvironment is monitored by fluorescence and absorption spectral techniques has been reported by the authors. The influence of surfactant, concentration and working experimental conditions on the fluorescence spectra of 2,3-diaminonaphthalene is thoroughly evaluated and discussed. The increase in fluorescence intensity in micellar media can be attributed to the increase in quantum efficiency suggests that the suspended hydrophobic 2,3-diaminonaphthalene molecules have been solubilised. The solubilizing action has been supplemented and confirmed by few theoretically calculated spectral parameters like, empirical fluorescence coefficient (k_f), quantum yield (ϕ_f), molar extinction coefficient (ε) and Stokes' shift values.

Keywords: Surfactants, 2,3-Diaminonaphthalene , Fluorescence, Solubilization.