

5th International Conference and Exhibition on Analytical & Bioanalytical Techniques

August 18-20, 2014 DoubleTree by Hilton Beijing, China

Spectrofluorimetry: A critical review on factors that influence fluorescent intensity in the analysis of diverse chemical substances

Ahmad Uba

Usmanu Danfodiyo University, Nigeria

Spectrofluorimetry or simply Fluorometry is a technique which uses the measurement of the intensity of fluorescent light emitted by substance to be examined in relation to that emitted by a given substance. It is a widely used photoluminescence method in analytical chemistry and is ideal for analysis of small quantities (in microgram) of fluorescent materials particularly where interference in UV-vis spectrometry is a major analytical constrain. It has high sensitivity, selectivity and is most preferred spectrometric assay method for a number of chemical substances including food, and drugs. The success of quantification and its reliability using the method rely solely on the intensity of the fluorescent light emitted by the sample solution and detected at the detector. In this article, critical review of the factors influencing fluorescent intensity including quantum yield, intensity of incident light, path length, adsorption, oxygen, pH, photodecomposition, temperature, viscosity, scatter and quenchers were attempted.

Biography

Ahmad Uba has BSc, MSc and PhD, (2010) all in Applied Chemistry from Usmanu Danfodiyo University, Sokoto, Nigeria. He is presently a senior lecturer and Head, Department of Pharmaceutical and Medicinal Chemistry, Faculty of Pharmaceutical Sciences, Usmanu Danfodiyo University, Sokoto. He has more than 20 publications in reputed local and international journals and has supervised 74 undergraduates and 10 postgraduate academic works in applied chemistry.

ahmadubaonline@yahoo.com