

Name: _____

Section: _____ Date: _____

Preliminary Report

Experiment: Fluorescence, Absorption, and Excitation Spectra of Polycyclic Aromatic Hydrocarbons as a Tool for Quantitative Analysis

1. At 580 nm, the wavelength of its maximum absorption, the complex FeSCN^{2+} has a molar absorptivity of $7.00 \times 10^3 \text{ L cm}^{-1} \text{ mol}^{-1}$. Calculate the absorbance of a 3.75×10^{-5} M solution of the complex at 580 nm in a 1.00 cm cell.
 2. Briefly describe or define
 - a. Vibrational relaxation
 - b) internal conversion
 3. Describe the basic components of an instrument to measure emission spectra (fluoremeter).
 4. Why do some absorbing compounds fluoresce while others do not?
 5. Define limit of detection.
-