

Pre-lab Questions Lab #1: Conjugated Dyes

1. Draw resonance structures for Dye #2.
2. What is the number of π electrons in the conjugated chain in Dye #4? Make an energy level sketch for Dye #4.
3. Presuming that the extinction coefficient of a dye at a wavelength of observation equals $\epsilon = 50,000 \text{ M}^{-1}\text{cm}^{-1}$, calculate its concentration in order to observe the absorbance $A = 1.0$ in 1 cm cuvette.
4. Describe how to prepare a 3 mL of solution with the concentration determined in #3 from a stock solution of 1×10^{-4} .