

GATORADE SPECTROSCOPY LAB ACTIVITY

Prelab questions

- What is absorbance?
- How is absorbance related to the distance the light travels through the sample (b)?
- How is absorbance related to the concentration of the solution (c)?
- When light passes through a blue solution, why is 100% of the light NOT transmitted? (Why is some light absorbed?)

Determining optimum wavelength

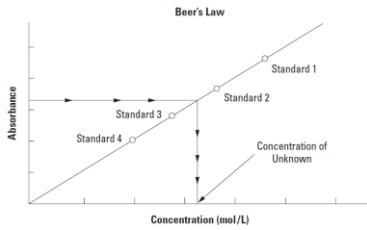
- Calibrate the machine.
- What should we use as a blank?

- Let the machine do the work.
- It will choose the wavelength with maximum absorbance.

How will we determine the concentration of blue dye in Gatorade?

- What data will you need to gather?
- How should you present your information?

Beer's law plot



Dilutions

- Each group will dilute the stock solution to a different concentration
- Only make 10 mL of your solution

Testing absorbance



- Each group will test the absorbance of their dilution.
- Record your data on the board.

Lab activity requirements (due next class)



- Your data
- Your dilution calculations
- Class data
- Graph
- Line
- Equation of the line
- Concentration of unknown determination
