

SPECTROSCOPY LABS – What in Lab Notebooks

Absorption Spectrum Lab & Beer's Law

Usual Heading (Lab Title, Date Completed, Lab Partner, Source)

Objective

Procedure (you do not have to explain how to use the spectrophotometer more than "the absorbance of the red solution was measured with a spectrophotometer at ___?___ nm. It is understood that you would have calibrated the machine at that wavelength.)

Data

-Absorption Values for solution analyzed with Spec-20

-Absorption Values for each solution analyzed with the SpectroVis-Plus

Graphs of Absorption versus Wavelength (2)

**Each spectrum needs to be clearly labeled.

**Below the graph, identify the wavelengths of maximum abs. for each solution.

Conclusion

(restate objective, was objective achieved – back up with data!, sources of error, idea for improvement, main lesson learned regarding spectroscopy)

Beer's Law Experiment

Data

- Concentration of Each Solution

- Absorption Curve for Stock Solution (what was used to identify test wavelengths)
Identify peak wavelength (max), intermediate wavelength, and minimum wavelength

-Absorption Values of Solutions (at max, min, and intermediate wavelengths)

-Beer's Law Graphs (with best fit lines) for each wavelength tested

-Equations of Lines from Beer's Law Graphs applied to determine concentration of "Unknown"

-% Error for Each Wavelength

-Calculations Shown!

-Conclusion

(restate objective, was objective achieved – back up with data!, sources of error, idea for improvement, main lesson learned regarding spectroscopy)