

# Chemistry Mini-Lab

## WS Energy of Electron Transitions

<u>Name</u>
<u>Date</u>

In this mini-lab, you are going to measure the wavelength of atomic emissions and determine the energy released by the electron as it transitions from one quantum state to another. Questions 1-3 are worth 10 points. Question 4 is worth 40 points. As always, use proper units and significant figures throughout.

- 1) Using the spectroscope, measure the wavelength of one emission from your assigned atom. Be sure to get a careful recording of the value with proper units and significant figures. Note that the spectroscope is rated to be accurate to  $\pm 5$  nm.

Element:

Emission color:

Emission wavelength:

- 2) Using the information presented during the class discussion, calculate the frequency of this emission. Show your work.

Emission frequency:

- 3) Using the information presented during the class discussion, calculate the energy of this emission. Show your work.

Emission energy:

- 4) Write an introduction for this mini-lab. Attach a typed introduction to this sheet. Your introduction cannot be any more than 2 typed pages. Be sure to mention all the key points discussed in class