

Name _____ Section _____

Partner _____

CHM 111 Atomic Spectra Lab Report Form

Specify which lamps and salts you used in column 1. Identify each sample as C for continuous or L for line in column 2. For each line spectrum, list the color and position of the lines in column 3. Then use the calibration curve (see below) to determine the actual emission wavelengths in nm. Use wavelength to calculate the energy of the photons in kJ/mol for the mercury lamp and sodium salt, and fill in column 5. Watch units!

1. Source	2. Type	3. Color - cm	4. nm	5. Energy (kJ/mol)
Hg Lamp		Violet -	404	
		Blue -	436	
		Green -	546	
		Yellow -	580	
____ Lamp				
_____ Lamp				
Na salt				
____ salt				
____ salt				
Candle				

Attach a calibration plot using the data from Table 1. The known Hg wavelengths are the independent variable, and the positions you observe are the dependent – be sure you get them on the correct axes. Use this plot to determine the wavelengths for column 4. As always, show sample calculations.