Name: _____

AA Analysis of Copper Report Form

Using Excel produce a standard curve by plotting absorbance versus copper concentration in ppm (mg/L) for the three standard solution concentrations and the blank (zero absorbance). Attach a print out of the standard curve to the Report Form. Be sure to include labels, equation for the straight line, and the R^2 value.

Data and Results

Unknown # _____

Calibration curve data:

Concentration (ppm)	*Absorbance*
0	0
1.25	
2.50	
5.00	

Absorbance of diluted vitamin tablet's solution: [ ]

Using the absorbance value for your vitamin tablet's solution and your standard curve determine the copper in the unknown.

1. Cu concentration mg/liter of diluted sample: [ ]

2. Cu concentration mg/liter of original solution before dilution: [ ]

3. The mg of copper per tablet from your concentration in #1 and #2: [ ]

Show calculations and/or explanation for #1, #2, and #3 above.

Questions:

4. Which procedure: dissolving the tablet and transferring to the volumetric flask, or the dilution in step #2 is most likely responsible for the greatest amount of error in your data? Why?

5. If a sample tablet contained 25 mg Cu, would the dilutions as used in the experimental procedure provide a concentration that could accurately be measured in the atomic absorption spectrophotometer. Explain your answer with supporting calculations. If the sample could not be analyzed, what could be done to correct the problem?