

doing that calculation.

- ONE sample calculation of determining the needed volumes of cobalt (II) stock solution and distilled water for making a 10-mL diluted solution (choose a final concentration from your experiment notes).
- ONE sample calculation of plugging in Absorbance of the unknown sample to the Beer-Lambert Law (the best fit line equation of your calibration curve) to get its concentration.
- ONE sample calculation of finding the amount (in the unit of milligrams) of cobalt in one kilogram of soil. Look at your lab manual for the information on how the unknown cobalt solution was prepared.

Discussion (2.5pts)

- Discuss how closely the calibration curve matches a straight line and how that might indicate how accurate it is (Refer to the R^2 value). Also look at the y intercept and what its value means.
- Discuss possible errors and limitations in the procedures used in this investigation.
- Refer to the information provided in your lab manual and discuss whether there is enough cobalt in the soil sample tested in this lab. If not, determine how much cobalt (II) nitrate should be added to the soil to meet the necessary nutritional needs of the animals. Include any necessary calculations here.

Conclusions (1pt)

- Summarize what results were determined (without restating actual results).
- Did the experiment succeed? i.e.: Were all of the objectives mentioned in the "Introduction" achieved?
- Elucidate on the utility of Beer-Lambert's Law and include your recommendations to the cooperative extension service regarding amending soil of the country farms.