

Arsenopyrite Project

Progress report (15 points)

By the end of the fourth laboratory period, your group should have worked out a procedure for the spectrophotometric determination of Fe in your samples. Please provide the following:

1. A final version of the calibration plot representing your standards for the complexed iron.
2. A brief explanation of the experimental design your group developed for the Fe control. Be sure to discuss the detection limits of your method, and include the data collected related to the control experiment.
3. A plot showing the iron concentration evolving in the samples you have analyzed so far.
4. A one or two paragraph discussion of your results.

Make sure all plots are correctly labeled and titled. Do not include a background on the plots you hand in (the default background in Excel is sometimes gray). A calibration plot should be linear! If there's a lot of noise in your calibration plot, recognize it will not do for the final report and explain what your plans are to fix it. Plots of your data, on the other hand, may be quite noisy and in fact may not show any measurable iron. Rethink your procedure. Did you estimate the iron correctly? Is the procedure correct for forming the complex? For example, if your aliquots are buffered at a pH of 2, and you have not changed the pH of your sample to form the complex, you will not see color. Complexes form with dependency on pH.

Hand in no more than four pages of data and discussion. This report will be graded on completeness, quality of the graphs (including the formatting), and the quality of discussion presented.