

Formal Lab Report Format

Lab Report Format: The format of your Lab report for CHEM117L . The following format is required. Each section must be clearly labeled in your notebook!

- I. **Title:** Include your name (and lab partners), experiment title, and date
- II. **Statement of Purpose:** Clearly and concisely describe the purpose of the experiment, including the general method that will be used and anticipated results. This should be brief, two or three sentences maximum. Use complete sentences.
- III. **Background:** Include pertinent information like balanced chemical reactions, hazard information and references to the source for the experimental procedure.
- IV. **Procedure:** A concise summary of the procedure (and any modifications) in **outlined** form. DO NOT copy verbatim from your lab manual, substantial penalties will result.
- V. **Data:** Raw numerical data, as well as any observations, instrument parameters, chemical information, etc. This must be separated from the procedure sections. Computer filenames and identities must be recorded here as well. If several spectra need be included in the notebook. A data table summarizing all data must be included for the complete data set.
- VI. **Results and Data Treatment:** Present an organized example of your calculations, with brief explanations provided when necessary. Include any plots and graphs and a table of summary data. Don't forget relevant analysis and consideration of significant figures!
- VII. **Discussion and Conclusion:** This section must be typed and stapled to page(s) in your notebook. The Discussion and Conclusion section is weighed most heavily when grading. Include a discussion of the significance of your results in terms of meaning, accuracy, precision, and error analysis. Include any insight you feel are important as well and appropriate references.

For each experiment, consider the following issues in your discussion.
 1. What are the primary limitations to quantitative applications of this technique (sensitivity, linearity, detection limits).
 2. What other types of analytes would this technique be appropriate for?
 3. What is the estimated replacement cost for the instrument? Include the source for your estimate.
- VIII. Answer all the question at the end of the experiment