

Formal Report Instructions **General Chemistry Laboratory**

The formal lab report must be typed or printed from a word processor. If you do not have one at home, there are two computer labs on campus; one is located in SC400 and the other in AS 370.

The form of the report is very important. The following is the only acceptable form and any deviation from it will be substantially penalized. A plagiarized (i.e. copied from the lab manual or from another student) lab report will be given a grade of zero.

Cover Page: The cover page is to have on it the following: Your Name; Your Partner(s) Name(s) in Parentheses; Title of the Experiment; Course Title and Number; and the Date

The body of the report should start on a separate page. Each section should be clearly labeled as follows:

- I. Objective: The objective statement gives the underlying reason for doing the experiment.. It is not a statement of the means by which the end is achieved, although the means may be included. It is to be written using complete sentence structure.

This is a good place to explain that a scientist writes in the PASSIVE voice. You should NOT write in either the first person or second person for your formal lab report. Avoid using pronouns such as "I" or "my" at all times.

- II. Introduction: In the Introduction you should write in both words and equations a description of the chemistry that you are expecting to carry out. Do not use broad sweeping statements. You must be as explicit as possible. Since you are discussing what you are about to do, the Introduction is to be written in the present tense or future tense; it is not to be written in the past tense.
- III. Data and Observations: Within this section you should have two subsections, data and observations. The data should be tabulated and NOT buried within the text. Observations can be listed or tabulated but NOT buried within the text. This section should also include sample calculations for any value given in the data section that is not a measurement. Copies of original data are NOT accepted.
- IV. Results and Calculations: Results and/or calculations may be in a separate section or they may be included in either the Data and Observations section or in the Discussion of Results section. If the calculations are included with the data and observations, it must be clear as to what is data and what are calculations; also the sections should then be titled "Data, Observations, and Results".
- V. Discussion of Results: This is the most important part of the report. This is where you interpret your data and calculations. You must address the question: What was the

significance of the data? The discussion should relate the data and results to the stated objective(s) of the experiment. As a rule, the answers to the post-lab text/lab manual questions (other than calculations) should be incorporated in the discussion. An explanation as to whether or not the data obtained conformed to expectations and/or a comparison of the results to known or accepted values should also be included in this section. You should also address the following questions: What, if any, were the discrepancies and what could account for these discrepancies? What can you say in regard to the precision and accuracy of your data? An error analysis should be briefly given.

- VI. Conclusion: The conclusion should be a simple statement of the results of your experiment. It should always be an answer to the question posed or implied by the objective.
- VII. References: A complete list of all references which provides the title of the reference, author or editor, publisher, year of publication, and page(s) used.
For web site references give the complete URL.

For additional information about writing a formal report consult *The ACS Style Guide*; Dodd, Janet S., Ed; American Chemical Society: Washington, DC, 1986.