

## Lab Report Format

on first page:

Write the experiment title and two letter designation on the cover page and  
written by "your name"  
partner "partner's name"  
date performed

**SUMMARY** State the objective of the experiment, the results you found, give a literature value if one is available, and make a comparison between your value and accepted one by reporting percent error. Use complete sentences in your report. Make sure you report the source of your literature values. Report the experimental uncertainty associated with your results. Do not include any description of the experimental procedure. Your answer must include appropriate units and correct number of significant figures.

on page 2 and beyond:

**DATA** List in tables the primary data that has not been subjected to any analysis, and calculated data. Symbols must be defined and units must be given. Include tables of intermediate and final results and make it clear what the connection is to the primary data. Tables should have a heading and be numbered.

**ANALYSIS** In this section you explain in a step by step manner how the data was analyzed. In other words how does one get from the primary data to the final results. This procedure will rely on the relevant theoretical and empirical equations. show equations upon which calculations or plots are based. Make sure the symbols used in the equations are clearly defined and that equations are numbered sequentially. Refer to the tables to indicate where numbers are found and figures as necessary whenever data is plotted. Show one example of each type of calculations in analysis and include units. Be complete and include all equations and data that was used. A person should be able to take data you give and repeat you complete analysis without having to look at another source besides your report. Give numerical values and units of any constants you use.

**REFERENCES** References should be numbered in order of appearance in the body of your lab report and referred to in the report by number. List the author, journal, pages, and year for articles. List the author, title, publisher, location, year and pages for a book. Include lab handouts, textbook, etc., and any reference books as part of your references.

**FIGURES** Figures should be referred to by number and should be included at the end of your report.. Label each figure with name of compound and property being plotted as appropriate. If linear regression is done write the slope, intercept, and correlation coefficient (r value) by hand and include units and appropriate number of significant figures

## Scientific Writing Style

Laboratory reports should be written in a style appropriate for scientific communication. For chemists, the definitive manual is The ACS Style Guide, published by the American Chemical Society. Copies are available in the Chemistry Library and the UTC Lupton Library.

The following four examples are provided to help you get started.

1. "I dissolved 4g of NaCl in 100mL of water."  
*Not acceptable.* The writer is using the first person singular "I".
2. "Dissolve 4g of NaCl in 100mL of water."  
*Not acceptable.* The writer is using the imperative voice. We don't give commands in lab reports. In lab reports we are stated what was done not giving directions of what to do.
3. "4g of NaCl was dissolved in 100mL of water."  
*Acceptable.* The passive voice is used commonly in scientific writing.
4. "We dissolved 4g of NaCl in 100mL of water."  
*Acceptable.* Many journals are now accepting this form.

## **Lab Report presentation reminders**

WHEN WRITING YOUR LAB REPORTS MAKE SURE YOU:

Follow the format given by your professor in charge of your lab section.

Type your lab report on standard 8.5 x 11 inch paper stapled together in the upper left hand corner.

Type so that your report is legible, neat and well organized, or it will not be accepted.

Strive for conciseness, clarity, and logic.

Use proper English (this includes grammar, spelling, punctuation, syntax, etc.) Your report grade will be lowered if there are errors in language usage.

Label each main section in the report.

Identify any symbols used.

Number in order any equations used. Place the number of the equation in parentheses to the right of the equation.

Present numerical data in tables with columns labeled and units indicated. Try to use as few tables as appropriate to report the information, however you must fit each table on a single page.

Include on your figures a title, labeled axes with units indicated, and even incremental spacing along each axis with the increments clearly shown. Draw a small symbol such as a circle around each data point and if more than one type of data is on the figure distinguish the points by using a different symbol for each type.