

INTRODUCTION

Preparation for Experiments

Before coming to the laboratory, it is essential that you prepare for the experiment by reading any appropriate lecture notes and the introduction and experimental procedure of the experiment. A general understanding of the experiment and procedures will save you time and reduce the possibility of making serious mistakes. You should also do the pre-lab before coming to lab.

Lab Reports

- Lab reports are due the following week in the lab unless otherwise stated by the instructor.
- Hand-written lab reports are acceptable. It is not necessary to type up your lab report on a computer. However, if you use a computer, pay attention to formatting such as: capitalization and the use of subscripts and superscripts when typing chemical formulas and symbols. Marks will be deducted for incorrect spelling and improperly formatted formulas and symbols.

Your lab report should contain the following pages

1. Cover Page

- Experiment number and title of experiment
- Student's name and partner's name(s)
- Date of the Experiment
- Sign your lab report
- Objective of the experiment (restate in your own words by paraphrasing and including additional details). Think of what needs to be done in the lab and how it will be done.
- Conclusion (in your own words) in two or three sentences in the third person passive voice. Do not use personal pronouns such as "I" or "we". Please consult your instructors in COMM and CHEM for the correct format and tips on writing these parts of the lab report.

Example

Excerpt from lab manual	Your lab report
Objective <ul style="list-style-type: none">• To identify a substance by measuring it's physical properties	Objective <ul style="list-style-type: none">• Physical properties will be observed and measured on an unknown liquid• The boiling point and refractive index of the substance will be measured using different equipment. Conclusion <p>The unknown was a clear and colourless liquid that was volatile. A b.p. of 78.6°C and R.I. of 1.363 were measured for the liquid. Using the CRC Handbook, the data matched the properties of ethanol (C₂H₆O) so the unknown is ethanol.</p>

2. Observations/Data

- Use the data sheets provided in the lab manual.
- Enter data into data sheet directly **IN INK**, not on a piece of scrap paper, nor on paper towels
- neatly tabulated (watch significant figures, units ...)
- Any mistakes made in data entry should be crossed out **NEATLY** with a fine line. Do **NOT**
- Data should be checked and **SIGNED** by instructor before leaving laboratory.

3. Calculations

- Show one example of each type of calculation. Calculations can be done in pencil.
- Calculations can be done in the space provided on the data sheets.
- Show all *numbers and units* used in all calculations and record the final answer with the correct number of significant figures.

4. Graph (when required)

- Proper graph paper must be used. (i.e. - Do not use papers with squares, engineering papers ...)
- The graph should nearly fill a 8-1/2" x 11" page.
- Computer generated graphs are acceptable.
- Each graph must contain the following information:
 - a) Title of experiment, Experiment #, Graph # (if more than one graph)
 - b) Descriptive Title of Graph (by convention "Y versus X")
 - c) Chemical equation(s) with physical states
 - d) Label for the axes with appropriate units
If the axis is $\ln [\text{Cu}^{2+}]$, then the label should be " $\ln [\text{Cu}^{2+}]$ ($[\text{Cu}^{2+}]$ in moles/L)"

5. Related Questions

- These questions should be answered in a concise and clear manner using the proper English and grammar. If the question involves a calculation, use the correct units and significant figures in your work