

Formal Laboratory Report – General Guidelines

General Chemistry • Skyline College

PRE-LAB

Heading

- Title of experiment and number, your name, and the date.

Purpose

- In 1-3 sentences, explain the question you are trying to answer or the problem that you face and are trying to solve.

General Strategy

- Explain the background concepts and the general procedural methods you will use to answer the question or solve the problem in the purpose. Any important reactions being studied should be written as complete, balanced equations and briefly discussed.

Data Tables

- All data tables must be prepared in the notebook prior to the start of lab. Tables should be well-organized and allow for easy entry of data and should leave room for additional trials that may be required.

Answers to Pre-Lab Questions

LAB REPORT

Heading

- Title of experiment and number, your name, the dates the experiment was performed, and the names of lab partners.

Data / Observations (including completed Data Tables)

- Qualitative and quantitative measurements. This section is a record of what you do and observe, *as you perform the experiment*. Tables for data should be prepared prior to the lab session.
- All quantitative data must be recorded with *units* in appropriate tables. ***All data taken in lab must be recorded in pen directly in the lab notebook. DO NOT record information in the tables in the lab manual.*** These tables are presented as an example and guide ONLY!
- Qualitative data (observations) – colors, textures, evolution of gases, precipitations, etc. – should be recorded here as well. Any modifications you make to the published lab procedures (or procedures you devise in the prelab) should also be recorded here.

Calculations/ Results

- Calculations, tables, graphs, and qualitative verbal descriptions of outcomes. All calculations must be shown with original formulas and full solutions. Keep track of units at all steps. Label all calculations, tables and graphs. Summarize results in a table.

Discussion of Results / Theory / Error Analysis

- *How does the theory behind the experiment apply to your results? What do your results and observations mean? State % errors and explain why results might have differed with expectations. What modifications would improve the results and reduce error?* These are sample questions to guide your discussion; other ideas will likely apply to your particular experiment. ***This is an opportunity to display your understanding of the experiment.***

Conclusions

- What do you conclude from your results/observations? The conclusion answers the questions or indicates your solution to the problems stated in the *Purpose*.

Answers to the Post-Lab Questions