

LABORATORY REPORT

General Template

Experiment Title	
Course / Subject	
Experiment No.	
Date Performed	
Date Submitted	
Author / Student Name	
Student ID	
Lab Partner(s)	
Instructor / TA	
Lab Section / Group	

1. Abstract

A concise summary (150–250 words) of the entire report. State the purpose, the methods used, the main results (with key numerical values), and the principal conclusion. Write the abstract last, after all other sections are complete.

2. Introduction

Provide background information and context. Explain the relevant theory, define key terms, and state any equations that will be used. Conclude with a clear statement of the objective(s) and hypothesis.

2.1 Background and Theory

2.2 Objectives

- Objective 1
- Objective 2
- Objective 3

2.3 Hypothesis

3. Materials and Equipment

List all materials, chemicals, instruments, and software used. Include model numbers, concentrations, and quantities where relevant.

4. Safety Considerations

Identify hazards, list required PPE (gloves, goggles, lab coat, etc.), describe waste-disposal procedures, and note any emergency protocols specific to this experiment.

4.1 Hazards

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4.2 Personal Protective Equipment (PPE)

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4.3 Waste Disposal

5. Methods / Procedure

Describe what was actually done in the lab, written in past tense and passive voice (e.g., "the solution was heated to 80 °C"). Provide enough detail that another researcher could reproduce the experiment. If you followed a published protocol, cite it and note any deviations.

1. Step 1:
2. Step 2:
3. Step 3:
4. Step 4:
5. Step 5:

6. Results

Present your raw data, observations, and processed results without interpretation. Use tables, figures, and graphs where appropriate. Each table and figure must have a caption (e.g., "Table 1: ...", "Figure 1: ...") and be referenced in the text.

6.1 Observations

6.2 Data Table

Table 1: [Caption — describe what the table shows]

Trial	Variable A	Variable B	Measurement	Uncertainty
1				
2				
3				
4				
5				

6.3 Calculations

Show one full sample calculation for each type of computation. Include the equation, substituted values, and the result with correct units and significant figures.

6.4 Figures / Graphs

[Insert figure here]

Figure 1: [Caption — describe the figure and its axes/units]

7. Discussion

Interpret your results. Explain what they mean, whether they support your hypothesis, and how they compare to theoretical or published values. Discuss trends, anomalies, and the physical/chemical reasoning behind them.

7.1 Interpretation of Results

7.2 Comparison with Theoretical Values

7.3 Sources of Error

Distinguish between systematic errors (instrument calibration, methodological bias) and random errors (measurement scatter). Quantify when possible.

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7.4 Suggestions for Improvement

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8. Conclusion

Restate the objectives and summarise the key findings (with numerical values). State whether the hypothesis was supported. Keep this section concise — typically one short paragraph.

9. References

List all cited sources in a consistent style (APA, IEEE, ACS, etc., as required by your instructor).

- [1]
- [2]
- [3]

10. Appendices

Include raw data sheets, extended calculations, instrument printouts, additional figures, or any supplementary material here. Label as Appendix A, Appendix B, etc.

Appendix A — Raw Data

Appendix B — Sample Calculations