

## Lab Report Checklist

*(Use this checklist to ensure your lab report is complete, accurate, and ready to submit.)*

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### ✓ 1. Title Page

- Title is specific and descriptive
  - Your name is included
  - Course name and number
  - Instructor's name
  - Lab partner(s) listed (if applicable)
  - Date of experiment
  - Date of submission
  - All formatting requirements followed
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### ✓ 2. Abstract

- 150–250 words (or required length)
  - Includes purpose of experiment
  - Brief description of methods
  - Key quantitative results included
  - Main conclusion stated
  - No unnecessary details or citations
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### ✓ 3. Introduction

- Clear background information included
- Scientific concepts explained
- At least 2–4 citations from credible sources
- Research question or objective clearly stated
- Explicit hypothesis and predictions included
- Logical flow from general to specific

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#### ✓ 4. Materials and Methods

- All materials listed with specifications (concentrations, sizes, models, etc.)
- Full description of the experimental setup
- Procedure written in **past tense, third person**
- Includes quantities, times, temperatures, sample sizes
- Identifies independent, dependent, and controlled variables
- Controls clearly described
- Statistical tools or software listed
- Enough detail for replication

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#### ✓ 5. Results

##### Tables

- Tables numbered correctly (Table 1, Table 2...)
- Each table has a descriptive title
- Units included in column headers
- Rounded to correct significant figures
- Data organized clearly and consistently

##### Figures (Graphs, Images, Diagrams)

- Figures numbered correctly (Figure 1, Figure 2...)
- Clear descriptive titles and captions
- Axes labeled with units
- Appropriate graph type used
- Legend included if needed
- Error bars included where appropriate

##### Written Summary

- Trends or patterns objectively described
- No interpretation or explanation (facts only)

- All numerical results reported consistently

### **Statistical Analysis**

- Correct statistical tests applied
- p-values reported
- Confidence intervals included (if required)
- Mean and standard deviation provided
- Regression or correlation reported when necessary
- All statistics match figures/tables

### **Error Analysis**

- Sources of random error listed
  - Sources of systematic error listed
  - Instrument uncertainties included
  - Error propagation shown (if required)
  - Final uncertainty range provided
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## **✓ 6. Discussion**

- Main findings restated clearly
  - Scientific explanations provided
  - Results compared to previous research or theory
  - Unexpected results addressed
  - Limitations acknowledged
  - Error sources tied to their effects on results
  - Suggestions for future improvements included
  - No repetition of results section
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## **✓ 7. Conclusion**

- Purpose restated
- Major quantitative findings summarized

- Hypothesis confirmed or rejected
  - Significance of findings stated
  - No new data introduced
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#### ✓ 8. References

- All in-text citations included in reference list
  - All references credible and appropriate
  - Required citation style used (APA/MLA/Chicago)
  - All elements formatted correctly
  - No missing authors, dates, or titles
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#### ✓ 9. Appendices (If Required)

- Raw data included
  - Sample calculations shown step-by-step
  - Additional figures and tables provided
  - Supplementary materials labeled and referenced in the text
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#### ✓ 10. Formatting & Final Review

- Section headings present and correctly formatted
- Report follows required page length
- Grammar and spelling checked
- Passive voice and scientific tone used
- All figures and tables referenced in the text
- Neat and professional appearance
- PDF or required file format prepared properly