

Condensed Abstract and Lab Report Guidelines

IMPORTANT: Do not waste words! Consider your audience. Tell a story.

SUMMARY

Abstract

Purpose: The reader should come away with a good idea of the overall project and results.
Breakdown: Objective 1 sent What was the question being probed?
Method 1-2 sent What is the name of the type of experiment?
Results/Error 1-2 sent What information was gathered? Was it adequate?

Notes: *Language: past tense, factual, stand-alone, short*
Be as specific as possible except for the method/techniques which should be general.

LAB REPORT

Introduction

Purpose: The reader should be given enough background to draw his/her own conclusions once the data is presented.
Breakdown: Purpose/Objective 1 sent Why are these sorts of experiments important?
Theory 3-10 sent What do I need to know to make sure my results are meaningful?
Equations as needed Are there mathematical/chemical equations relevant to these expts?
Method 3-5 sent What are the key components/techniques in the experimental design?

Notes: *Language: past (What has been done?), present (What is accepted?), future (How will method be applied?)*
Equations should be embedded in the text with reference markers and explained.
Diagrams and pictures should be numbered and described or explained in the text.

Experimental

Part I:

Purpose: The reader should be able to follow how the data was obtained.
Breakdown: Materials List/Table What special equipment/chemicals are needed?
Physical Properties List/Table For each chemical, what properties might be useful?
Safety (hazardous materials) List/Table What are the dangers associated with each chemical?
How can those dangers be minimized?
Once exposed, what actions should be taken?
Procedure Paragraph form
Observations in Procedure
Data (significant figures) Table

Notes: *Language: past (What was done? What was seen, heard, smelled, tasted, felt or otherwise detected when it was done?)*

Part II:

Purpose: The reader should be able to apply your processing to another set of data obtained by the same method.
For all calculations (show equations, calculation set-up without numbers then with numbers. Explain/reference where those numbers came from. Include significant figures and units.)
Graphs should be as close to a fully used page in size as possible. All axes, lines and special points should have specific labels.

Results/Discussion

Purpose: The reader should be convinced of each of the conclusions and understand how to improve the exptl design.
Breakdown: Results as needed What were the final results of the experiments? summaries, tables
Interpretation as needed Were there any trends in the data?
Evaluation as needed Did it work? Can the numbers be trusted?
Error sources 1-2 sent What stages of the experiment might lead to inaccurate results?
Error analysis 1-10 sent What will be the effect of these errors on the results?
Modifications 1-5 sent How might the experimental design be modified to eliminate the error sources or minimize their effect?

Notes: *Language: past (results)*

References

Purpose: The reader should be made aware of who's did work related to the question you are trying to answer.
Breakdown: Include: Author, Title, Edition, Publisher/Location, Editor, Year, Page number
Notes: *Number each reference. Embed that number in the text wherever a citation applies.*