PRRE1003 Resources, Processes & Materials Engineering

Lab B Report Template

Please use this template as a basis for writing your Lab B report. The report should cover **Experiment 2 only.**

Any text in blue is comments or instructions that should be removed from your final report. Text in black should be included in your final report, with modification if needed.

General information about technical report writing was covered in Workshop 1. In particular, please refer to the *PRRE1003 Technical Report Writing Guidelines* on Blackboard.

The report is limited to seven pages, not including the title page, references and Appendix.

An Abstract, Table of Contents, List of Figures and List of Tables shouldn't be included. See the Lab B Worksheet for a rubric that shows how the report will be marked.

TITLE PAGE

The first page of the report should be a title page that has the following information:

- The unit name: PRRE1003 Resources, Processes & Materials Engineering
- The assessment name: Lab B Report
- The semester and year

- The Group Code and Class #
- The names and student IDs of the people in your group
- The date and time of your lab session (face to face)

- The table of Peer Assessment Factors (PAFs) from the Excel sheet **Peer Assessment Lab B** provided under BB/Lab Submissions/, *if your group feels that all team members did not contribute equally*. If you leave this Table blank, I will assume that all members contributed equally to the group report.

	First Name	Last Name	Student ID	Peer Assessment Factor (PAF)
Person 1				
Person 2				
Person 3				
Person 4				
Number of team members				

Begin the rest of your report on a new page.

INTRODUCTION

Please provide an introduction, of suggested length about 0.5-1 page, which covers *in your own words* the following topics:

- The significance of the lab topic, particularly the relationship between thermal, electrical and mechanical properties for different classes of materials, such as metals and polymers.
- The aims of the lab as you see them.
- Some brief background information or theory relevant to the lab work and its aims. Give details of the scientific principles that should be demonstrated by the work in the report, or the hypothesis that the work attempts to prove or verify. Use headings or subsections if needed.

You may need to do some independent reading to address the first and third points above—be sure to reference any sources you use, including any images you incorporate into your report.

EXPERIMENTAL MATERIALS, APPARATUS AND METHOD

In this section (suggested length about 0.5 pages), very briefly describe in your own words the materials, apparatus and experimental method used in Experiment 2. Please use paragraphs unless you are listing equipment.

RESULTS AND DISCUSSION

This section should present the data you collected in Experiment 2, your observations about it, and the answers to the specific questions asked in the Lab B Worksheet.

You'll need to include the experimental data in your report; for example, by presenting your Table 5 and answers to the questions in Experiment 2. Is it important to distinguish "raw data", like the mass of metal, from "calculated data", like the heat absorbed by the water? If so, then consider modifying the Table.

You will need to show a sample calculation for Cp, and also explain how you calculated density. Can you also include uncertainty estimates?

If you did your Lab face to face, please only use a data set from 1 person to present your results. You may find it useful to reflect on why your results may or may not be different from those obtained for the Lab B online videos (if a group member did the lab online).

Are there any other points that you think should be made about your investigations into the metal's heat capacity? Are there any relevant wider issues? Add a discussion about these matters, if needed.

CONCLUSIONS AND RECOMMENDATIONS

Please write a short conclusion (1 or 2 paragraphs) about the experiment. Conclusions are about the overarching technical lessons you have learnt: they are not the same as a summary (please refer to the *PRRE1003 Technical Report Writing Guidelines*).

Can you make any recommendations related to the lab? This may need brainstorming.

REFERENCES

Did you refer to any material to help write your report, for example to understand any concepts or provide background information? Did you include any images in your report? Have you included any direct quotations? If so, you should include these sources in a list of references here and cite the references in the text of your report (or in the figure or table captions). Please use the Vancouver reference style (http://libguides.library.curtin.edu.au/referencing/vancouver).

APPENDIX

This should include items that are not critical to the reader's ability to understand your report. For example, a sample calculations or lengthy addendums. It is an optional part of your report.

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