

Project Thermodynamics: Report writing

As a next step in the report writing skills you have been trained in during the previous quarters, we now expect you to write a **full report** on your results of the complete group, but with emphasis on the results of you and your partner. This will be done in the style of a typical physical chemistry paper, which is similar to what is described in chapter 9 of Overton, Johnson & Scott.

Of course some of the items mentioned below might be less relevant for your actual experiment.

Title

A concise title covering the essentials of the goal of the experiment.

Abstract

Not more than 4 lines summarising the experiment, typically written after having finished the report.

Introduction

Describing the context of the research question, the actual question or problem to be solved.

Theory

The theoretical background including relevant equations. Here you can also discuss the chosen limitations.

Experimental (or Methods)

The experimental setup chosen, typically with a schematic drawing and the way the experiment was performed, including why you, for instance, use a stirring bar etc.. The chemicals used; in case of too much information you can also put it in an appendix with reference to it.

Results

Give a short and orderly overview of the results obtained, preferably in the form of graphs or tables. In case of too much information you can also put it in an appendix with reference to it.

Discussion

In some cases it is more convenient to make a combined section 'Results and Discussion'.

Discuss the results in the light of the research question and your expectations. Make an estimation of the accuracy of the results. Discuss what went wrong and try to explain this as well as what could be improved to get better results. Interpret your results taking also into account the results of the other group members, which can be summarized in an appendix.

Conclusion

A conclusion is not a summary. It rather reflects on the main findings of the research presented in the light of the question/problem you tried to solve,

References

Sum up references used: books (including title, author and edition as well as the chapter or pages), websites (including the date), journal papers (including title, authors, journal title, volume, year, and pages).

Use the Vancouver Style (section 6.4 in Overton, Johnson en Scott).

Appendices

In the appendix you can also give a short summary of the results of the other members of the group and data of yourself, which are too extensive for the Results section.

Figures and tables

Every figure and table needs a number (to refer to in the text) and a concise caption, that informs the reader what he/she can and should read from the figure or table. Avoid too small fonts in figures.