

Title

Abstract (3 pts.)

The abstract is a concise summary of the lab report.

A good abstract should: state the purpose (what you did), procedure (how you did it, what quantities did you measure), final results (including units and relative uncertainties), and conclusion(s).

The abstract is a single paragraph, generally 5-7 sentences long or 150-250 word.

Note: Please do not include general statements about poor-quality equipment or “human-error” if you discuss possible sources of larger uncertainties. See more details in the separate file on Bb.

Data (3 pts.)

Lab participation

Raw data – signed by your instructor – is the only acceptable data and is in your notebook

Quality data

All data has to be collected and presented in table format.

All measured values should have: the symbol of the physical quantity, the numerical value, the SI unit, and the measurement uncertainty/error.

Data Analysis (3 pts.)

Graphs should be done using the software of your choice. Please do not forget: title, axes labels, and units, and please interpret the graphs and extract information, as applicable.

Please pay attention to units and significant figures, and use scientific notation when necessary.

Compare your results with theoretical expectations, i.e. calculate percent differences, and state if they agree or not. Most results should compare to within at most 5-10% of theoretically calculated values.

Answer questions from handout as instructed. Clearly label the answers keeping the numeration used in handout.

Statements such as “human error” or “misuse of lab equipment” are not sufficient/not acceptable.

Overall Quality (1 pt.)

Please use correct language and scientific expressions.

Lab reports must be typed, except formulas, calculations, which can be neatly hand-written.

Lab reports do not have to be long, on the contrary, be succinct and do not include long explanations.

The maximum length is two pages, excluding tables and graphs.

Plagiarism is not acceptable. Materials reproduced have to cite the source.

Lab reports are due one week following the lab.

Your original data sheet – signed by the instructor – has to be available in your lab notebook.