



Quick guide to **Writing Lab Reports**

► **Lab books and lab reports**

You may be asked to keep a lab book and to write up some experiments as formal lab reports. So, what are these?

A lab book should be a complete record of what has been done in the lab, which can be followed by someone from outside of the project team; it should therefore be a permanent, legible, complete and understandable record. Within the lab book you should detail the aims, processes and interpretation of the experiments and the associated data. Lab books may also be called lab diaries because each entry should be dated, meaning that the lab book can be used to track the progress of experiments and projects. Please check the requirements for your specific course in your course handbook or similar document. Seek advice from your course leader if you are unsure what to include in your lab book.

You may be asked to write up some experiments from your lab book into a formal lab report. Below is some general advice about writing lab reports.

► **Writing a lab report - General principles**

Writing lab reports prepares you for having to report on your work to a section leader or colleague in the workplace, or to write a scientific paper for publication. Formal lab reports are usually prepared using a word processor, along with graphing software to prepare any figures.

Your lab report should be clear, concise and coherent.

Clear so that someone from your discipline, but who is unfamiliar with the particular experiment, can understand it. The report should be complete (i.e. include all required information), accurate, and avoid ambiguity.

Concise so that you avoid repetition, other forms of redundancy, and do not waste the reader's time! (Scientists do not like waffle!)

Coherent so that it is easy to follow and ensures that the reader reaches the same understanding at the end of the document as you intended!



► General rules in scientific writing

Language style:

- Formal language is required with appropriate technical terms.

Abbreviations and non-standard acronyms must be written in full the first time you use them, followed by the abbreviation in brackets. Thereafter, you can use the shortened version. (*E.g. Peripheral blood lymphocytes (PBLs) were extracted from 250 ml whole blood. PBLs were incubated for 3 days under the following conditions...*). However, only use an abbreviation if you are using it more than three times in the full report.

Space between numbers and units e.g. 3 mg is correct, 10 % is correct.

Figures (e.g. photos, diagrams, graphs) should be numbered consecutively and have a label/caption/legend included below. All graphs should have labelled axes (including units).

Tables are not figures and should be numbered separately from figures, with a label/caption/legend included above. Tables should have headings for each column.

Referencing is important in both style and substance. The selection and use of relevant sources of information should be carefully considered. Generally, using all web-based (non-peer reviewed) sources is not considered good academic practice. The way the reference information is formatted into a reference list at the end of your piece of writing and at the point of use (in-text citations) should be given close attention.

► Common sections in a lab report

1. Title, authors and affiliation	5. Results
2. Abstract	6. Discussions
3. Aim of the experiment / hypothesis being tested	7. Conclusions
4. Introduction	8. Acknowledgements

► Check local guidelines and assessment criteria

VERY IMPORTANT. Check your laboratory handbook (or similar document) for specific guidelines and requirements for your course and discipline. There tend to be different referencing conventions between scientific disciplines and there may be other specific requirements for your report. This Quick Guide can give you a broad understanding of how to write a lab report but, if available, it is important to follow the specific guidelines you are given as part of your course.



Further advice and larger text can be found online:
my.surrey.ac.uk/academicsskills
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