

Lab Notes (how to keep a lab notebook) Instructions to students and postdocs

Important

Your lab notes should be legible to someone else. They are important work records and belong to the laboratory you are working in, i.e. they are ***not your private property*** and will remain in the laboratory when you leave it. They must be written in such a way that everyone with some lab experience can repeat the experiment. Despite an often casual, sometimes “playful”, attitude scientific research is a serious professional activity that costs a lot of money. Detailed and professional record keeping is mandatory.

Most institutional rules require that you use a book and not loose sheets of paper!

Rules

- Your notebook is the primary record of all experiments. It should contain consecutively numbered pages. Every entry must be dated.
- Every lab notebook should contain a table of contents at the beginning indicating date, page number and title of your experiments.
- Every record (gels, printouts, autorads, photos etc.) must be taped into your book. If kept in a separate file, every single item (even repetitive exposures of the same gel) must be dated, must contain reference to notebook page (and vice versa), and must be properly labelled. Label, label, label everything! For instance, gels where you do not know anymore what is on which lane are worthless and a waste of time and money. Also, notes put on scrap paper during an experiment should be transferred into the notebook. While you are still a beginner, also record the details for making reagents.
- Every single experiment should have a short header section stating the aim of the experiment in a few sentences and, at the end a conclusion (did or did not work, what to change next time, what result you got, and how to evaluate it).
- The methods must be crystal clear and reproducible. You can refer to previous pages, but even small changes in the proceedings must be recorded. Whenever you use a method for the first time, your notebook must contain a full description of all details. If the method is obtained from a method file, from somebody else’s notebook or from a company leaflet, xerox it and tape it into your book.
- Every experiment must be recorded. This also applies to experiments that did not work.
- If experiments are utilized for a paper, make sure you note in your notebook which experiments are used for which publication. It is essential that all published data can eventually be traced back to your lab notes!

Remember:

An experiment that is not properly recorded is worthless.

Your lab notes are the essence of your work: be as careful in keeping your records as you are in performing your experiments. They are also legal documents that are subject to scrutiny and investigation if questions arise concerning any aspects of your work.