

## Laboratory Expectations (Notebook & Reports)

**Your Laboratory Notebook** must make carbonless copies of each page, so that one copy can be torn out and submitted to your Teaching Assistant (TA). One example of this type of notebook is the National, Laboratory Research Pad, #43-641, which is available at the University Store and the Textbook Annex. Others of that type are acceptable, such as the lab notebook used in most general chemistry labs. A normal spiral-bound notebook is NOT acceptable.

Your notebook provides a permanent record of your laboratory work. Keeping detailed notes makes it easier to analyze results, write a discussion, and understand why a problem may have occurred. The carbon copy of all notebook entries will serve as a major part of the report that you will submit for each experiment. All entries must be written directly into the notebook in ink. Do not write information on scraps of paper with the intent of transcribing it later on. Copies of **all** written work must be submitted to your TA.

**Before coming to lab**, read in detail the experimental procedure (EP) and any assigned supplementary material (SM) on the course web site. You must bring both a printed copy of the full EP and your abbreviated prelab outline/flowchart to each lab. This flowchart should be entered into your lab notebook, written in your own words, and should include a minimum of detail for you to efficiently carry out the experimental procedures for the lab using only that document. The outline must also include a summary of any hazards you anticipate for the week, and the waste disposal procedures for chemicals used in the experiment. **Before you may begin work, you must have your TA sign your prelab outline.**

If the TA deems that the outline is poorly prepared, you will lose credit (usually 10% of the grade for that lab) and will be required to leave the lab until you are better prepared. A poorly prepared lab worker is a danger to everyone in the lab and will not be allowed to participate.

**Good record keeping** is achieved by directly entering data and procedures into your notebook *as the work is being done*. Items such as weights of reagents and products, detailed observations, data obtained, calculations, sketches of apparatus, and physical data of isolated compounds (such

as melting/boiling points or peak maxima) are entered at this time. A stranger with a minimal knowledge of the field should be able understand and reproduce your entire experiment based on just the information in your lab notebook.

**Before you leave the lab, you must have your TA sign your notebook after the last entry. Unsigned work will get a zero. If your lab space is dirty, your TA will not sign your notebook.**

**Lab reports are due** before your next scheduled lab period. Give your TA copies of all material from your notebook, plus your typed report. Your complete write-up should include the following sections (more complete details later):

Hand-written:

    Prelab material

    Lab notebook entries (observations and raw data)

Typed:

    Title page

    Introduction to lab (prepared after the lab)

    Data analysis (calculations / work-up of raw data)

    Discussion (significance of results, conclusions)

    Answers to assigned questions (if any)

<b>Lab report grading scheme:</b>	Points
	10    Prelab outline
	10    Lab notebook / bench cleanliness
	30    Content of report
	20    Quality of writing
	<u>30</u> <u>Assigned questions</u>
	100   points total for each experiment

Reports must be written independently. If in doubt, do it yourself.

*Any evidence of plagiarism will result in a zero score on the lab for all parties involved, and may result in a permanent "F" grade for the course.*

It is perfectly acceptable to discuss the lab write-ups with your peers, and to work cooperatively to answer challenging questions. The TA's and Prof. are here to help you out on the difficult portions. It is unacceptable to divide up the work for lab reports, or to simply copy the answers of your classmates, past or present.

For this class, you may spend at least as much time (or more time) working on the lab reports as actually doing the experiments. The skills of data analysis and technical writing are important ones to master.