

University of Massachusetts at Amherst
Department of Chemistry
Undergraduate Organic Laboratories

Notebook and Grading Policies. Chem 269.

This handout makes clear what is expected of you. Read it carefully and refer to it during the semester.

REQUIRED NOTEBOOK: one in which every other page is perforated so that a carbon copy of each page can be torn out and submitted to your Teaching Assistant (TA). One example of this type of notebook is the Hayden McNeil Student Lab Notebook, which is available at the Textbook Annex. Others of that type are acceptable and are available at the University Store. A normal spiral-bound notebook is NOT acceptable. Loose sheets are 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 (pre-, during-, and post-lab entries) will serve as the SOLE REPORT that you will submit for each experiment. A separate report, which has been typed or rewritten will not be accepted. If kept properly, the notebook also provides documentation to show that you have done the work. 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. By doing so, information may become garbled or lost. Copies of ALL written work must be submitted to your TA. **More detailed instructions, along with an example, are given on the Chem 269 website** (“How to keep your notebook”).

BEFORE COMING TO LAB, enter into your notebook the title of the experiment, reactions (if any), and structures and names of chemicals involved, showing correct stoichiometry if applicable, a table of relevant physical constants, and the Prelab Outline (described in more detail below). Good preparation is essential to safe and effective lab work. **Therefore, before you may begin work, you must present to your TA your Prelab Outline and your copy of the Experimental Procedure for that experiment.** The TA will check to see that the outline is acceptable and that you have a copy of the procedure. If the TA deems that you are insufficiently prepared, you will be asked to leave and credit will be lost. Physical constants which cannot be found in the lab text may be obtained from the Table of Physical Constants of Organic Compounds in the CRC Handbook of Chemistry and Physics (reference section of the Science and Engineering Library, on Library website, and in the Org Lab). If you have difficulty finding a compound by name, use the molecular formula index at the end of the Table. Chemfinder.com may also prove useful.

DURING THE LAB SESSION, enter directly into the notebook, as the work is being done, procedures actually carried out (this will differ somewhat from procedures in the prelab outline), detailed observations, data obtained, and calculations. Items such as detailed procedures, sketches of apparatus, physical data of compounds isolated (e.g., melting points (MPs) and boiling points (BPs)), and weights of reagents and products are entered at this time. Before you leave the lab, to document your work, you must have your instructor sign your notebook after the last entry. **Unsigned work will not be given credit.**

BEFORE THE NEXT LAB PERIOD, a summary of results, an analysis of data, a brief discussion, and answers to assigned questions will be entered into your notebook. This post-lab material will normally be limited to about two pages. The carbon copy of the complete write-up must be submitted to your instructor at the beginning of your next lab period. Late submissions will result in the loss of 1 point per day, unless you have a valid excuse and special arrangements have been made with your TA or course instructor.

LAB REPORT GRADING SCHEME:

	<u>points</u>
2.0	prelab outline
2.0	notebook
2.0	lab technique (subjective evaluation by TA)
2.0	results and discussion
<u>2.0</u>	<u>answers to assigned questions</u>
10	points total for each week's work

OWL Assignments. Prelab. To help you prepare for each experiment, an assignment using OWL (Online Web-based Learning) will be done for credit. The deadlines for completing the assignments are given in OWL. It is highly recommended that you complete the assignment before preparing your prelab outline, as this will help you to understand the material better. Extensions will be granted only in extreme cases to individuals who have a valid well-documented reason for missing an assignment. Postlab. OWL postlab assignments will be available for many experiments. It is your responsibility to pay close attention to all deadlines. No partial credit. ADVICE: in case of computer or other last minute problems do not wait until the last hour to do the OWL assignments. The OWL assignment will count as 15% of the final grade. Details on using OWL are given on the Chem 269 web site.

Quizzes. Quizzes will be given during lecture times (dates given on "Schedule of Experiments" and "Calendar" handouts). Each quiz will count as 10% of your final grade. For those with valid, well-documented excuses for missing a quiz, one make-up quiz will be given at the end of the semester. If you wish to be considered for a make-up quiz, you must contact the instructor either before missing a quiz or as soon as possible afterward and no later than the Monday immediately following the quiz date.

Final letter grades. At the end of the semester, TA grades will be adjusted to the overall TA average. The final grade will consist of the following: adjusted TA grade (65%), Quiz 1 (10%), Quiz 2 (10%), OWL (15%). The final overall average will be set equal to the grade of B.

Weekly Handouts. You are required to download copies of weekly handouts for each experiment. These handouts are found on the web at <http://www.chem.umass.edu/people/samal/orginorgsites.html> (or go to <http://www.chem.umass.edu/> – Undergraduate – Courses Web Pages - Organic). These handouts cover background information and give the procedures that will be followed in the lab. The handout is the primary source from which the prelab outline will be prepared. OWL assignments and email communications will also provide information to be included in the prelab outline. For most experiments, besides the "Experiment Handout", the web site will provide additional information, such as photos of set-ups and procedures. Downloading handouts well in advance will lessen the likelihood of running into computer problems.

Notes on the prelab outline: Before coming to lab, you must carefully read the weekly handout and prepare an outline of the procedure that you will follow in the lab. Information gained from OWL assignments and email communications should also be incorporated into the outline. The outline should be written in your own words, in outline form, and in enough detail so that you could do the experiment by following the outline only. You may be required to do this. The outline should be short enough, but complete, and in a form that is easy to follow as you work. A well-prepared outline will allow you to carry out the lab work efficiently and effectively. The outline must also include a summary of safety considerations and waste disposal procedures for chemicals used in that experiment. A test of a good outline is to read it over and see if you could actually carry out the experiment using only the outline. If the TA deems that the outline is poorly prepared, you will lose credit (1 point) and will be required to leave the lab, returning only after you have rewritten the outline in a way that is acceptable to your TA. In such a case the remaining lab time will likely be insufficient to complete the experiment, resulting in the loss of additional credit. A poorly prepared lab worker is a danger to everyone in the lab and will not be allowed to work in the lab. Note that working directly from the downloaded experiment handout is not acceptable.

Due dates: After an experiment is finished, all completed material must be submitted to your TA at the beginning of the next lab period. Late submissions result in the loss of 1 point per day. Occasionally a sample needs time to dry. In such a case its weight and melting point (MP) may be taken during scheduled morning hours in the Org Lab, or if your schedule does not permit that, may be taken during the next lab period. In the latter case you would be given until the following day to submit the report.

Morning Lab Hours. The Organic Lab will be open during scheduled AM hours (posted on the web and at the lab). During AM hours the only lab operations that may be done are the determination of melting points and weighings. This time may also be used to consult with the TA on duty. Make-ups may NOT be done during these times.

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