

C: Laboratory Policies

Goggles & Lab Coats

Students must wear OSHA approved safety goggles and white 100% cotton laboratory coat in the laboratory at all times. Failure to follow this rule will cause the student to be expelled from the laboratory. It is required that you wear clothing that completely covers your legs and feet while working in the laboratory. Inadequate protection often leads to injury. In addition, gloves will be provided for all experiments.

Pre-Laboratory Preparation

Many of the Chemistry 2BH laboratory experiments are quite long and many use chemicals that could present a hazard if used improperly. Thus, students are required to judiciously prepare for each experiment by carefully reading the experiment and writing a Title, Purpose, Procedure (brief outline), and Data (tables) section before arriving at the laboratory. Any student without these sections completed at the beginning of the period will have to leave the laboratory room until they are completed. In this situation, the student will still be required to complete the experiment in the allocated time and no extra time will be granted.

Writing a Laboratory Report

You will report your experimental findings in the form of a laboratory report. Below is the suggested format that your report should follow. The report should be written in your bound laboratory notebook. You will turn in an accurate high quality and easily readable photocopy of the report as it appears in the laboratory notebook at the beginning of the period following the one which was allocated for the completion of the experiment.

Below is a general outline of a common format that is often used in science laboratory courses. **Discuss this format with your T.A. during the first laboratory period so that you clearly understand what will be expected.**

- **Title:** The report should have a unique title which concisely describes the experiment. It should not be the title of the experiment.
- **Purpose:** This is a brief and concise statement which describes the goals of the experiment, the methods which are employed, and the major results of the experiment. Any pertinent chemical reactions are generally indicated.
- **Procedure:** A brief and concise outline (paragraph format) in your own words of each step of the experiment should be included. It should not be a copy of the lab manual. If you are using a published procedure, you should also cite the literature or laboratory manual. A drawing of an unusual or hard to describe apparatus can also be included.
- **Data and Observations:** Report all measurements and observations which are pertinent to the experiment. Be sure to note any problems or unexpected occurrences. It is important that this section be as neat and as organized as possible. The use of tables will often help in this regard. **All data must be recorded directly into the notebook at the time it is collected.** Severe penalty will be imposed for pencil or transcribed data entries. Mistakes are not deleted. Simply draw a line through the error and record the correction. Your notebook is subject to examination at any time.
- **Calculations:** This section generally includes any complicated calculations which are involved in the experiment. Again it is important to use foresight when organizing this section. Equations are recommended to be left in terms of variables and plugging in the variable for each trial is not wanted.
- **Results:** Report the outcome of the experiment in table form and include the relevant statistics here. Brief interpretations of observations and results may also be discussed in this section.
- **Conclusions:** Discuss the outcome of the experiment and any consequences the results might have. Discuss any sources of error in the experiment and your confidence in the results. Describe any practical methods that could be used to improve the experiment.
- **Questions:** All assigned questions are answered in this section.

All reports must be typed. A date should be indicated on each report, especially in the Data section. You must prepare for each experiment by writing the Title, Purpose, Procedure, and blank data tables before coming to the laboratory. It is also important to organize and prepare the format of the Data section before coming to the laboratory so that you will only need to neatly record your data and observations during the experiment. Each section should be clearly marked with a proper heading. Your notebook should be organized and written in such a manner that another chemist could read it and repeat the experiment in precisely the way in which you did it.

Laboratory Make-Ups

Because many of the experiments require standard solutions and/or solutions of a limited shelf life, it is absolutely essential that students make every effort to come to the proper laboratory period to complete the experiment in the allocated time. In cases where the student cannot attend their registered laboratory period (emergencies and sickness only) **the student must supply verification of the emergency to their TA. The TA will then write a letter of exception that the student can use to gain admittance to another upcoming laboratory period.** Students will not be allowed to work in a non-registered laboratory period without such a letter. **Only in verified cases will the TA write such a letter and the student must make-up the experiment as soon as possible.** It is the student's responsibility to notify the stockroom of their intention to make-up an experiment so that all the needed chemicals are prepared.

Late Reports

Students must turn in their reports at the beginning of the laboratory period which follows the one allocated for the completion of the experiment. Students will turn in a typed laboratory report with copies of their original data attached. The reports will be promptly graded and returned to the students by the teaching assistant.

Late reports will incur a 5-point deduction for every day the report is late.

Unknowns

Students will obtain all unknowns from the stockroom (Room 3415). You must be explicit in your request for an unknown; that is, be sure you know the name of the experiment and unknown. You are required to show your laboratory notebook to the stockroom assistant who will mark in your book indicating that an unknown was obtained. A student may obtain extra unknown only once during the quarter without deduction. Any later requests for extra unknown will be met with a 50% reduction in points for that experiment. Extra unknown will only be provided to allow a student to complete the experiment and will not be provided to allow the student to refine result.

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