

## LAB NOTEBOOK GUIDELINES

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1. Your lab notebook is to be used only for your chemistry labs. It is not for lecture notes.
2. You are required to bring your lab manual and prepared lab notebook to lab each week. Failure to do so will result in a reduced grade for lab for that week. You will also be required to produce the missing outline next week. Failure to do so will result in a zero for the lab.
3. The first four pages of your notebook are to be set aside for a table of contents listing, in the order that they are completed, the title of the lab and the page of the lab notebook where the lab can be found.

### Sample Table of Contents

Table of Contents	
<u>TITLE</u>	<u>Page</u>
Qualitative Analysis of Household Chemicals	5
Flame Tests	11
...	

4. Each experiment in the notebook must start on the right hand page of the notebook. The first page of each lab experiment must include the date, the title of the lab, your lab partner's name and an outline of the lab procedure (which may be continued on successive pages as needed).

### Sample Lab Notebook Page

Page 5
Lab Partner: Mr. Grant September 17, 2005
Qualitative Analysis of Household Chemicals
Procedure: Obtain 11 small samples of household compounds. Dissolve of small portion (about the size of a pea) of each in 5 mL of water. Record observations or each compound on data sheet. For those compounds that do not dissolve . . .

5. Prior to lab each week, each student is required to complete in the lab notebook a procedural outline of the lab for that particular week. The outline is to be a step-by-step plan for working through the particular lab. It is not necessary to copy verbatim the procedure given in the lab manual. However, your outline must be sufficiently detailed so that you can correctly complete the experiment without having to refer to the lab manual. **DO NOT** attempt to write this outline right before your lab period! Complete this assignment two or three days prior to the lab period. You will be better prepared as a result.

6. All data and observations must be put in the lab notebook (so that you can refer to the information for lab quizzes!!). The data should be in tabular form. To make things simple, you may take the data sheet for a particular experiment from the lab manual and tape it into the lab notebook. You should do this prior to any lab.

7. Answers to questions, information and observations about "unknowns" and any calculations must be included with the lab and recorded in the lab manual.

8. **REMEMBER:** Lab constitutes a significant portion of your grade. Keeping an accurate, neat and up-to-date notebook is a necessity. Notebooks will be checked periodically as a part of your lab grade.

## *INSTRUCTIONS FOR POST-LAB SUMMARIES*

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At the conclusion of each lab, you are expected to complete a lab “write-up.” Unlike a formal “lab report”, these write-ups are to be done in the “second half” of your lab notebook and must be appropriately titled and noted in your Table of Contents. As is the case with all pre-lab notes and lab observations, these summary remarks are to be written in pen. The basic format of each write-up is as follows:

1. **RESULTS/OBSERVATIONS:** In this section, you should summarize your results and observations. For “qualitative” labs (experiments involving the identification of unknowns), you should summarize your observations and inferences and describe any errors (and the reasons for such errors) in identifying these unknowns. For “quantitative” labs (those involving the calculation of specific quantities), you should summarize and discuss your calculations and results and to include comments on the results of the class as a whole, where appropriate. In addition, you are expected to include the calculation of any experimental and percent errors (deviations from accepted or theoretical values) and to discuss legitimate reasons why your results may have deviated from these expected values. To say that your results were off because you “misweighed something” is NOT legitimate!! You must discuss real chemical and/or physical principles that could have lead to the deviations that you observed.
2. **CONCLUSIONS:** In this section, begin by BRIEFLY discussing the objective of the lab and give an overview of the procedure(s) (three to five sentences MAX). This is your opportunity to demonstrate that you really understood what this particular lab was all about. This section can be almost (emphasis on almost!) like a diary where you take the time to reflect upon your efforts in the lab. What did you learning by doing this lab? What concepts/principles were being demonstrated? What concepts are clearer now having done this lab? What principles still need clarification? In addition, make a conscious effort to think back to earlier labs. Do you see parallels between each of these exercises? Has revisiting certain procedures and concepts helped you to develop a deeper understanding of the topic(s)?
3. **QUESTIONS:** In this section, include the answers to any questions that are found in the lab manual.

All lab write-ups are due one week after the conclusion of the lab.