

Chem 2521 Laboratory Syllabus

General Laboratory Rules and Requirements:

1. You must have a bound laboratory notebook.
2. You **MUST** wear fully enclosing goggles (no glasses). If you forget your goggles you can rent them from the stockroom, the 1st time is free, it is \$.50 after that.
3. Do not wear shorts, sandals, or nylon type pants. These offer little protection against chemicals in the event of an accident.
4. Don't sit on lab benches.
5. Place bags, & coats on shelves or designated areas.
6. Do **NOT** eat or drink in the lab.
7. Wash hands before you leave the lab. Especially before eating.

Grading

The chemistry lab is worth 120 points. Ten points per lab.

Notebook musts:

1. Use a pen (NO PENCIL)
2. Draw a single line through a mistake. Do not scribble or use whiteout
3. Keep the notebook in column format.
4. Write on one side of the page
5. Make sure the procedure is completed **before** the lab starts. (this will be checked)

Your notebook should contain:

- I. Title and date should be at the top of every lab.
- II. Reaction scheme should be below the title.
- III. Put the reference below the reaction scheme: Williamson, *Macroscale & Microscale Organic Experiments*, pp. (fill in the page numbers used in the book!).
- IV. Lab partner(s):
- V. Procedure: (MUST be written in your own words!)
 1. Should take up 2/3 of the left side of the page.
 2. You should be able to use this and not your book.
 3. If the book tells you a figure to use, draw it in the lab notebook.
- VI. Observations: (very important; these can tell you if the reaction works or not)
 1. Put to the right of the procedure, when it occurs.
 2. Write down **EVERYTHING** you notice. Color changes, precip. formation, all weights, starting weight, end weights, boiling point, melting point, etc.
 3. If you forget to put the lab changes in the procedure put them in the observations.
 4. Do not write a paragraph of observations.
- VII. Results: (If you can put the data in **tabular format** do it, NO paragraphs)
 1. Put starting and ending weights of starting material and product here.
 2. Show all calculations used, i.e.: theoretical yield and percent yield.
 3. State melting points and boiling points here.
- VIII. Discussion: (Tells if you understood the lab)
 1. Do **NOT** rewrite the procedure here
 2. Write in paragraph form.
 3. Discuss about the results. Compare literature values with your experimental values.
 4. Discuss % yield. Is it low, high and why?
 5. If something went wrong in the lab for you state what happened and why. Did you forget a step, etc?
 6. If you were to repeat this lab what would you change?
- IX. You must have a table of contents and number each page! Do not rip out pages in the notebook!

If you do **not understand what you should put in your notebook look on pages 16-24 in the lab manual. For the procedure and observations look on page 24 in the lab manual.

TITLE		page # Date M/D/Y	Results:	page #
Reaction Scheme				
Reference: Williamson, <i>Macroscale & Microscale Organic Experiments</i> , pp (Fill this in).				
Partner(s): Fill this in				
Procedure:	Observations:		Discussion:	

How are points taken off?

1. Not prepared for the lab.
 2. Do not participate in the lab (have your partner do all of the work)
 3. Poor laboratory skills.
 4. Everything stated above you need. If it is minimal or not completed points will be taken away.
 5. No unknown #
 6. Wrong unknown
 8. Incorrect calculations or no calculations shown.
- Point values are the TA's decision.

If you miss a lab you must complete it another time. Otherwise you will get an incomplete for the course.
If you complete the lab in another TA's section you must get their permission and their signature.

Please email your TA if you need help or do not understand!