

Instructor Dr. Nathan J. Malmberg

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Lab Text *Microscale Organic Laboratory, Third Edition* by Dana W. Mayo, Ronald M. Pike and Peter K. Trumper, John Wiley and Sons, Inc. 2000. ISBN 0-471-32185-0

Also Required Students must also purchase a grid-ruled bound notebook and a lab coat and goggles.

Lab Meets Tuesday or Thursday at 1:00-5:00 PM in Wood 209

Description Application of principles from CHEM 3104 to organic reaction mechanisms and to organic qualitative analysis. Prerequisite: Grade of C or better in CHEM 3104 or its equivalent as determined by instructor. Additional fee required.

Goals The first part of the semester will be spent identifying unknown organic compounds. You will utilize chemical tests, outlined in Chapter 10 of your textbook, together with infrared characterization of your unknown, to uniquely identify each unknown. You will be graded on your experimental technique, but most of your grade will come about by correct identification of your compounds.

The last part of the semester will be devoted to a sequential synthesis reaction. Here, too, a small component of your grade will be based on your experimental technique and your recorded observations, but most of these points will come from your ability to compile your observations into a well-written lab report.

Additional Information regarding attendance, important semester dates, disabilities, academic dishonesty and other university-wide policies are available online at http://www.okbu.edu/academics/forms/Syllabus_Attachment_Spring09.pdf

Grades Grades will be assigned according to the following points:

First Guess	35	Lab Notebook (10 weeks at 4 points each)	40
Second Guess	30	Unknown Determinations (3 at 35 points each)	105
Third Guess	25	Lab Report for Synthesis	50
Correct Functional Group	15	Checkout	5
Total			200

Academic Dishonesty will not be tolerated. Examples of academic dishonesty include, but are not limited to:

- Copying the data or analysis of another student.
- Hiring another individual or company to perform your analysis.
- Copying another student's lab report writeup.
- Presenting information from an outside source without proper citation.

Instances of academic dishonesty will receive a zero for the assignment, and may result in additional action by the University. See the syllabus attachment for more information.

Unknown Determinations will be made no later than Friday, April 10 at 3:00 PM, but determinations may be presented at any time before this deadline. The identity of the unknown must be presented to Dr. Malmberg, at which point he will verify whether the answer is correct.

Lab Reports will be written describing the synthesis of hexaphenylbenzene performed during the last three weeks of lab. This lab report will conform to the style required for the Journal of Organic Chemistry, which can be found at <http://pubs.acs.org/journals/joceaah/index.html> under the info for authors link. Pay particular attention to the Guidelines for Authors section taken from the journal itself. The appropriate files may be emailed to Dr. Malmberg or printed out and turned in at the appropriate time. A rough draft of your lab report should be turned in during the week of May 4th at 2:00 PM on the day your lab normally meets. The rough draft will be worth a total of 10 points. The final version of the paper will be due at the beginning of lab during the week of May 11th, and will be worth a total of 40 points.

Safety Safety rules must be obeyed at all times. Failure to follow safety rules can result in serious injury or even death. Safety rules include:

- No horseplay in the lab.
- No unauthorized experiments.
- No food or drink in the lab at any time.
- No open-toed shoes.
- Know where all the exits are located.
- Know what kinds of hazards the chemicals you are working with will present.
- Know the experimental procedure for the lab.
- Safety goggles must be worn at all times in the lab.

Cleanliness Maintaining a clean work area is both a safety issue and a fiscal issue. In addition to your bench area, you will be assigned one of the common lab areas, which will be your responsibility to keep clean. Failure to clean your work area and your common area may result in a deduction of up to 4 points from your lab score for that day.

Attendance Attendance is required for laboratory. Any lab for which you do not show up will count as a zero. Exceptions will be made for:

- University-sponsored activities. You must make alternative arrangements with me at least a week in advance.
- Documented medical absence.
- Death in the family.

If you do miss a lab, and need to make alternate arrangements, please talk to me as soon as possible.

Late Policy Lab reports that are turned in late will be subject to the following penalties:

1 day	10 %
2 days	30 %
3 days	60 %
4 days	100 %

Exceptions will be made as for attendance.

Lab Notebook Format Your lab notebook should conform to the format given on pages 29–31 of your lab textbook. In particular, note the section on page 30 detailing the proper maintenance of the lab notebook. The lab notebook should contain both an initial plan of experiments to perform for the day, as well as the results of those experiments and any other experiments that were performed.

Lab notebooks must be checked by the instructor before leaving the lab to check for proper measurements and observations. The completed notebook will be turned in at the end of the semester. The notebook will be worth 4 points for each lab period of the semester.

Tentative Lab Schedule Spring 2009

Week	Lab
2/3–2/5	Checkin and Orientation
2/10–2/12	Begin Group Unknowns
2/17–2/19	Continue Group Unknowns
2/24–2/26	Begin Individual Unknowns
3/3–3/5	Continue Group and Individual Unknowns
3/10–3/12	Continue Group and Individual Unknowns
3/17–3/19	Spring Break
3/24–3/26	Continue Group and Individual Unknowns
3/31–4/2	Continue Group and Individual Unknowns
4/7–4/9	Synthesis of Benzoin
4/14–4/16	Synthesis of Benzil
4/21–4/23	Synthesis of Hexaphenylbenzene
4/28–4/30	Presentations
5/5–5/7	No Lab, Rough Drafts of Lab Reports Due
5/12–5/14	Final Lab Reports Due, Checkout