

# CHEM 312 - ORGANIC CHEMISTRY I – LAB

Fall 2008

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## Laboratory schedule:

Instructor: Dr. Monika Konaklieva  
Beeghly 4, (202) 885-1777, mkonak@american.edu

Office Hours: Tuesday & Thursday 1:00PM- 3:00PM

TA:

Textbook: "Macroscale and Microscale Organic Experiments" 3<sup>rd</sup> Edition by K.L. Williamson, 1999

Materials: **Safety Goggles**, Molecular Model Kit, Chemistry Lab Notebook,

🔒 For your safety 🔒  
**Eye protection is mandatory at all times in the laboratory**

Week of	Lab #	Title
Aug. 25	Check - in	<b>Safety Video</b>
Sept. 1  Monday 1 is Labor Day	1	<b>The organic Chemistry Dating Game</b> Melting and Boiling points. Identification of unknown compounds Read: pp. 66-73, pp. 82-87 and pp. 94-95 ***Monday lab combined with lab Monday Sept 8 session***
Sept. 8	2	<b>Thin – Layer Chromatography</b> Analysis of analgesics Read: pp. 156-162 ***Monday session combines lab #1 and #2***
Sept. 15	3	<b>Column Chromatography</b> Read: pp. 171-175

Sept. 22	4	<b>Extraction of Caffeine from Tea.</b> Crystallization of Caffeine isolated in the extraction experiment; determination of melting points. Read: pp. 127-130 and pp. 146-150 ***Save products for labs #12 & #13***
Sept. 29	5	<b>Quiz #1</b> <u>Case Study</u> : Identification of unknown ingredients of a "blood sample"
Oct. 6	6	<b>Bromination of Cholesterol</b> Read pp. 285-287
Oct. 13	7	<b>Epoxidation of Cholesterol</b> Read pp. 349-354
Oct. 20	8	<b>The Sn2 reaction: synthesis of 1-bromobutane</b> Read pp. 250-254
Oct. 27	9	<b>Nucleophilic substitution reactions of alkyl halides</b> Read pp. 258-264
Nov. 3	10	<b>Quizz #2</b> <b>Case Study</b> : Accidental drowning or a foul play
Nov. 10	11	<b>Infrared Spectroscopy.</b> Hands-on FTIR instrument, obtaining spectra of the saved products and starting materials from the designated experiments Read pp. 193-208
Nov. 17	12	Monday lab #6. no lab on Wednesday
Nov. 24	13	<b>Nuclear Magnetic Resonance Spectroscopy.</b> Obtaining spectra of the saved products and starting materials from the designated experiments Read pp. 215-221
Dec. 1		<b>Quiz # 3</b> Check out

**Changes in this schedule are expected. You will be informed in due time during Dr Konaklieva's classes and/or by messages posted on Black Board.**

## Grading :

The grades for the lab will be assessed on the quiz scores, lab reports and lab technique as indicated bellow for a total of 100 pts

Lab reports and notebook	60% -60pts
Technique	10% -10pts
Quizzes 3 x 10 pts	30% -30pts

There are no make up labs scheduled.

Should you miss a lab, it is your responsibility to inform the relevant TA of your absence and to arrange with the TA for the lab work to be done in another section **during the same week.**

For a better organization of your lab work, you are expected to arrive on time at every session, especially since most of the explanations are given at the beginning of the labs.

Academic integrity policy	<b>Standards of academic conduct are discussed in the Academic Integrity Code of American University, which can be found in the University Catalog.</b> There is no place in the higher education enterprise for those who violate this code by plagiarizing or receiving inappropriate assistance on examinations.
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