CHEM 312 - ORGANIC CHEMISTRY I – LAB

Fall 2008

Laboratory schedule:

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

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

TA:


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

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

<table>
<thead>
<tr>
<th>Week of</th>
<th>Lab #</th>
<th>Title</th>
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<tbody>
<tr>
<td>Aug. 25</td>
<td>Check - in</td>
<td>Safety Video</td>
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| Sept. 1 | 1 | The organic Chemistry Dating Game  
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 | Thin – Layer Chromatography  
Analysis of analgesics  
Read: pp. 156-162  
***Monday session combines lab #1 and #2*** |
| Sept. 15 | 3 | Column Chromatography  
Read: pp. 171-175 |
<table>
<thead>
<tr>
<th>Date</th>
<th>Lab No</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Sept. 22</td>
<td>4</td>
<td><strong>Extraction of Caffeine from Tea.</strong> Crystallization of Caffeine isolated in the extraction experiment; determination of melting points. Read: pp. 127-130 and pp. 146-150 <em><strong>Save products for labs #12 &amp; #13</strong></em></td>
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| Sept. 29   | 5      | **Quiz #1**  
*Case Study: Identification of unknown ingredients of a "blood sample"* |
| Oct. 6     | 6      | **Bromination of Cholesterol**  
Read pp. 285-287 |
| Oct. 13    | 7      | **Epoxidation of Cholesterol**  
Read pp. 349-354 |
| Oct. 20    | 8      | **The Sn2 reaction: synthesis of 1-bromobutane**  
Read pp. 250-254 |
| Oct. 27    | 9      | **Nucleophilic substitution reactions of alkyl halides**  
Read pp. 258-264 |
| Nov. 3     | 10     | **Quizz #2**  
*Case Study: Accidental drowning or a foul play* |
| Nov. 10    | 11     | **Infrared Spectroscopy.**  
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     | **Nuclear Magnetic Resonance Spectroscopy.**  
Obtaining spectra of the saved products and starting materials from the designated experiments  
Read pp. 215-221 |
| Dec. 1     |        | **Quiz # 3 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 below for a total of 100 pts

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<tbody>
<tr>
<td>Lab reports and notebook</td>
<td>60% -60pts</td>
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<tr>
<td>Technique</td>
<td>10% -10pts</td>
</tr>
<tr>
<td>Quizzes 3 x 10 pts</td>
<td>30% -30pts</td>
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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 | Standards of academic conduct are discussed in the Academic Integrity Code of American University, which can be found in the University Catalog. There is no place in the higher education enterprise for those who violate this code by plagiarizing or receiving inappropriate assistance on examinations. |