CHEME 302L—Organic Chemistry I Laboratory  
Fall 2009

Instructor: David R. Myers, Ph.D.  
Office: F119  Telephone: Ext. 7436 (528-7436)  
Office Hours: M 2:00-3:30; W 1:00-3:30, or by appointment.  
Course Location and Time: F128—Chemistry Laboratory; Tuesday 9:00 – 11:45 a.m.


Laboratory reports are due one week after the completion of the procedure. Late reports will receive a 5 pt/day late penalty. This really is for your own good!

You are expected to have done the reading for the laboratory procedure before coming into the lab. I will provide a brief ‘pre-lab’ lecture on some of the more interesting points, but understanding the procedure you follow is your responsibility. Much time can be saved by reading the procedure thoroughly, and thinking ahead i.e. what can I do/prepare now while I am waiting for what I am doing to finish?

Of course, the usual safety rules as outlined in General Chemistry apply, particularly the no contact lenses rule. This time I really mean it!

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<th>Week</th>
<th>Laboratory Procedure</th>
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| 1    | Check in. Introduction to some basic laboratory techniques.  
      Recrystallization of impure sulfanilamide (Exp. 3A);  
      Separation of a Three-Component Mixture. (Exp. 4D).  
      Reading: PLKE: pp. 22-25; 38-40; Techniques 8, 9, 11,  
      12; pp. 616-637; 647-693 |
| 2    | Column Chromatography (Exp. 5D)  
      Reading: PLKE pp. 42-43; 48-50; Technique 19 (Sections  
      4-16), pp. 760-777. |
| 3    | Thin Layer Chromatography; Identification of an  
      Unknown Analgesic Tablet (Exp. 11)  
      Reading: PLKE pp. 80-87; Technique 19 (Sections 1-3),  
      Technique 20; pp. 756-759; 777-792 |
Essential Oils from Spices: Oil of Cloves (Exp. 14A)

Reading: PLKE pp. 108-114; Techniques 7 (Section 10), 18, 25; pp. 611-614, 750-755; 833-867. (much of this last reading section will be done again next term in Organic Chemistry II)

Nucleophilic Substitution Reactions of Alkyl Halides (Handout)

Phase-Transfer Catalysis: Addition of Dichlorocarbene to Cyclohexene (Exp. 26)

Reading: PLKE pp. 217-223

Evaluating a Mechanism of Dihydroxylation via TLC (Handout)

Grignard Synthesis of Triphenylmethanol (Exp. 38A)

Reading: PLKE pp. 317-324.

N,N-Diethyl-m-toluamide: the Insect Repellent “OFF” (Exp. 47)

Reading: PLKE pp. 377-388

Sulfa Drugs: Preparation of Sulfanilamide (Exp. 48)

Reading: PLKE pp. 388-396

No laboratory—finish up Sulfa drugs (if needed)