

Chemistry 235: Organic Chemistry Laboratory Spring 2010

Text: Laboratory Manual for Organic Chemistry. A Microscale Approach, by W. R. Moore and A. Winston, McGraw-Hill, 1996.

	Date	Experiment	Subject	Quiz
Week 1	January 11-15		No Lab to Allow Schedules to Stabilize	
Week 2	January 18-22	3	Check-in, General Instructions, Safety, and the Lab Notebook AND Melting Points. Also study Ch.1 and Ch. 2.	Quiz 1
Week 3	January 25-29	4	Crystallization.	Quiz 2
Week 4	February 1-5	5	Distillation. Students work in pairs and share data. One does a simple distillation and the other does a fractional distillation.	Quiz 3
Week 5	February 8-12	6 7	Gas Chromatography AND Thin-Layer Chromatography (do both GC and TLC)	Quiz 4
Week 6	February 15-19	8	Stereochemistry: Molecular Models. Each student should bring a set of molecular models to class. You are advised to start this exercise before coming to the lab.	No Quiz
Week 7	February 22-26	9	Extraction.	Quiz 5
Week 8	March 1-5	14	S _N 1 and S _N 2 Reactions	Quiz 6
Week 9	March 8-12	15 16	E2 Elimination Reactions E1 Elimination Reactions. Students will work in pairs. One student will do expt. 15 and the other student will do expt. 16. They will share data and compare results. Come prepared to do both experiments.	Quiz 7
Week 10	March 15-19	19 20	Stereospecific Bromination of <i>trans</i> -Stilbene. Diphenylacetylene We will be doing a two-step synthesis of diphenylacetylene starting with stilbene.	Quiz 8
Week 11	March 22-26	17	Hydroboration - Oxidation of Alkenes	Quiz 9
	March 29 – April 2		No Lab. This is Spring Break	
Week 12	April 5-9	18	Reduction of Ketones to Alcohols with Sodium Borohydride	Quiz 10
Week 13	April 12-16	10 11	Infrared Spectroscopy Nuclear Magnetic Resonance Spectroscopy Study all three chapters. We will work on assigning structures (Ch.12) over the course of two periods.	Quiz 11
Week 14	April 19-23	12	Assignment of Structure by IR and 1 H-NMR Spectroscopy	Quiz 12

Week 15	April 26 - 30	Lab Final Examination and Check-out
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