

# ORGANIC CHEMISTRY LAB SPRING 2014

The lab component of this course is worth 155 points. Except for the three week Qualitative Organic Analysis lab, all of the lab writeups will be worth 15 points each. The QOA lab will be worth 30 points. The week 2 quiz on IR, stoichiometry, and significant figures will be worth 15 points, and lab performance will be worth 20 points (see the Lab Performance Matrix). Many of the experiments will be inquiry-based and will impact what we do in lecture as well. **The penalty for late lab reports is 5% per school day. Lab reports cannot be turned in after any have been returned.**

## Text –

Chem 220-221 Lab Manual, McDonald and Bendorf

## Academic Integrity-

Be aware that in accordance with the College's policy on academic honesty, any work you submit must be your own. Any instances of plagiarism (including copying answers from a classmate) will be penalized to the fullest extent possible and reported to the Provost and Dean of the College.

## Lab Performance Matrix-

	<b>1 (poor)</b>	<b>2 (fair)</b>	<b>3 (good)</b>	<b>4 (outstanding)</b>
<b>Safety – Personal Attire</b>	Must be frequently reminded to wear safety glasses, appropriate clothing or footwear. Brings food, drink, cell phone or other electronic device into lab.	Need occasional reminding about safety glasses or clothing/footwear. Does not bring food, drink or personal electronic devices into lab.	<b>Consistently wears safety glasses. Wears appropriate clothing and footwear. Does not bring food, drink, or personal electronic devices into lab.</b>	Consistently wears safety glasses and appropriate attire. Does not bring food, drink or personal electronic devices into lab. Never needs to be reminded of policy. Helps others follow safety rules.
<b>Safety – Work Area and Hygiene</b>	Spills are not cleaned-up right away. Bench or hood is left in poor condition on multiple occasions.	Bench and fume hood are not always left in good condition.	<b>Keeps a clean, uncluttered work area. Bench and fume hood are cleaned at end of lab. Shared space (ie. reagent hood) is clean.</b>	During lab, work area is clean, organized, and without clutter. Bench and fume hood are thoroughly cleaned and organized at end of lab. Checks shared space to ensure it is clean.
<b>Lab Equipment and Chemicals</b>	Improper disposal of chemicals on multiple occasions. Frequently fails to store equipment properly at end of lab. Leaves lids off reagents bottles.	Improper disposal of chemicals. May occasionally fail to store equipment properly at end of lab. Lids occasionally left off reagent bottles.	<b>Personal and shared equipment stored properly at end of lab. Lids kept on reagent bottles. Chemicals are disposed of properly.</b>	Personal and shared equipment stored properly. Lids kept on reagent bottles. Chemicals are disposed of properly. Helps to ensure that others are handling chemicals, equipment and waste properly.
<b>Preparation and Efficiency</b>	Misses prelab or is significantly late on multiple occasions. Or, uses lab time poorly.	Is late to prelab on more than one occasion or does not work efficiently in lab.	<b>Arrives on time or has been slightly late on one occasion. Works efficiently in lab.</b>	Arrives on time. Works efficiently in lab. Uses “downtime” effectively (such as to prepare for later parts of the experiment).
<b>Laboratory Technique</b>	Completes experiments with little attention to technique. Careless or abusive with instruments/ equipment.	Basic proficiency at lab techniques. Or, not careful with equipment and/or instruments.	<b>Careful execution of lab techniques. Handles equipment, instruments and chemicals with care.</b>	Careful and skilled execution of lab techniques. Handles equipment, instruments and chemicals with care.

## Schedule Organic Chemistry Lab 2, Spring 2014 –

WEEK	DATES	TOPIC	ASSIGNED READINGS	WRITEUP DUE*
<b>1</b>	1/7,9	The Reaction of 1-Octanol With Calcium Hypochlorite Check-in	handout	1/28,30
<b>2</b>	1/14,16	Radical Polymerization of Methyl Methacrylate, 1-Octanol/Ca(OCl) <sub>2</sub> part II	Chp. 32	1/21,23 <b>Lab Quiz</b>
<b>3</b>	1/21,23	1-Octanol/Ca(OCl) <sub>2</sub> part III		
<b>4</b>	1/28,30	The Competition: E <sub>2</sub> vs. S <sub>N</sub> 2 with 1-Bromodecane using Various Bases	handout	2/12 (W, class)
<b>5</b>	2/4,6	Diels-Alder Cycloaddition	Chp. 36	2/18,20
<b>6</b>	2/11,13	no lab		
<b>7</b>	2/18,20	Qualitative Organic Analysis	Chp. 40	3/25,27
<b>8</b>	2/25,27	Qualitative Organic Analysis	Chp. 40	
	3/4,6	S P R I N G   B R E A K		
<b>9</b>	3/11,13	Qualitative Organic Analysis	Chp. 40	
<b>10</b>	3/18,20	Qualitative Organic Analysis	Chp. 40	
<b>11</b>	3/25,27	The Synthesis of <i>N</i> -Pentyl Cinnamide <b>or</b> <b>V</b> for Virstatin	Chp. 46 <b>or</b> Chp. 45	part 1: 4/8,10 part 2: 4/15,17
<b>12</b>	4/1, 3	as above		
<b>13</b>	4/8,10	as above		
<b>14</b>	4/15,17	as above, check-out		

**\*Writeups (STAPLED) will be due at the beginning of lab (not prelab) on the indicated day.**