

CHEM 461
Inorganic Chemistry Laboratory
Spring, 2008

Lab: W 1:00–5:00 pm, Faraday 209
 Lab TAs: Rob Mishur Faraday 338
 Lab Professor: T. M. Gilbert, Faraday West 309

<u>Week</u>	<u>Experiment</u>	<u>Topic</u>
		* Before the first lab, read Chapters 1–6 in the lab text!
1	1/16	Check In
2	1/23	26
		Synthesis of <i>cis</i> and <i>trans</i> -Co(en) ₂ Cl ₂ ⁺
3	1/30	20
		Metal Complexes of Dimethylsulfoxide +finish last week's lab if necessary
4	2/6	22
		Synthesis of Metal Acetylacetonates +finish last week's lab if necessary **Expt 26 Lab Report Due**
5	2/13	
		Catchup Week finish last week's lab if necessary **Expt 20 Lab Report Due**
6	2/20	29
		Determination of Δ _o in Cr (III) Complexes +finish last week's lab if necessary **Expt 22 Lab Report Due**
7	2/27	Handout
		Preparation of Cr (II) Acetate +finish last week's lab if necessary
8	3/5	37
		Platinum (II) Complexes - the Trans Effect +finish last week's lab if necessary **Expt 29 Lab Report Due**
	3/12	
		No Lab–Spring Break
9	3/19	40 + Handout
		Preparation and Sublimation of Ferrocene +finish last week's lab if necessary **Cr (II) Acetate Lab Report Due**
10	3/26	Handout
		Preparation of (1,3,5-C ₆ H ₃ Me ₃)Mo(CO) ₃ +finish last week's lab if necessary **Expt 37 Lab Report Due**
11	4/2	30
		Preparation and Study of a Cobalt (II) Oxygen Complex +finish last week's lab if necessary **Expt 40 Lab Report Due**
12	4/9	30
		Preparation and Study of a Cobalt (II) Oxygen Complex (finish) **(Mesitylene)Mo(CO) ₃ Lab Report Due**
13	4/16	
		Check Out
14	4/23	
		Comprehensive Written Lab Exam **Expt 30 Lab Report Due**
15	4/30	
		Exam and Grade Return

Information

Text: Z. Szafran, R. M. Pike, M. M. Singh, "Microscale Inorganic Chemistry", Wiley, New York, 1990. There will also be handouts for some of the labs.

Lab Notebooks: You must purchase a bound laboratory notebook before the first lab. The notebook must contain carbon pages, because you will be turning in the carbon page of your results with your lab report. Notebooks meeting this criterion are available from the Bookstore and also from the Stockroom. The Stockroom versions cost less, and the Chem Club reaps the profit.

Before each lab, you should generate a prelab in the notebook with details as to how the lab will proceed. All laboratory observations, calculations, spectral data, and other relevant data should also be written neatly in the lab book during the experiment. A significant portion of your score on a particular lab will depend upon how neatly, precisely, and completely you enter data and observations into the notebook.

Lab Reports: Once the experiment is completed, you will write/type and turn in a lab report detailing what you observed and concluded. The report will consist of the following parts:

Introduction/Setup	10%
Experimental Section	10%
Results Section	50%
Observations - 10%	
Yield and % Yield - 20%	
Characterization - 20%	
Discussion Section	10%
Conclusions and Answers to Questions	20%

As proof that your Results Section accurately represents what you accomplished in the lab, you will attach the carbon sheet from your notebook dealing with the experimental results to the report.

The TAs will inform you as to how they want each section written, and what components must appear. They have sole responsibility for lab grading; however, if problems arise, the lab professor will intervene.

Advice on writing the Lab Report appears in Chapter 3 of your Lab text.

Grades: Each experiment/report is worth 100 points. You will also take a comprehensive written Laboratory Final worth 100 points. The grading scale will be 90%+ = A, 80 - 89.9% = B, 70 - 79.9% = C, 60 - 69.9% = D, <60% = F. This scale may be revised slightly downward, but there will not be a curve.

Additional Notes:

(1) You must perform all experiments independently unless instructed otherwise. Using another student's results without permission from the TA and professor will result in your receiving a zero for that experiment.

(2) You must write your report independently. If the TA determines that you wrote your report with substantial assistance from others, he will give your report a score of zero.

(3) Failure to check out during the assigned time at the end of the semester will result in a failing grade for the entire course.