

# Chem 1212 Lab Dr. Ahuja -Spring 2018

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**Instructors:** Dr. Tarushee Ahuja – Chem 1212 Lab  
**Lab hours:** Friday 8.00-11.00 am  
Office: 208 Courtland North, email: [tahuja1@gsu.edu](mailto:tahuja1@gsu.edu)  
Office Hours: Wednesday 10.00-11.00 am or by appointment

**Location:** PSC 101 Prelab lecture  
PSC 355 Lab

**Text:** GSU Lab manual (will be handed out at first lab lecture). A course outline, schedule of activities, grading, etc., is included in the lab manual.

**Online**

**Material:** i-college under Laboratory section of 1212 course.

**Comments on Lab:**

1. Individualized project-type lab.
2. Lab notebooks should be kept up to date. **Bound notebook required.** All data must be recorded in this notebook **in ink.**
3. A second note-taking book during lab lecture is also required. During lab lectures, students take notes to prepare for labs/quizzes.
4. Before lab each week, students are responsible to read and write in their lab notebooks about each experiment beforehand (refer to schedule on syllabus). Students should check on icollege for documents pertaining to the experiments. **A summary in your own words (numbered/bullet points) about the experiment including purpose, materials, and experimental methods must be written in the notebook before beginning experiment.**

TAs will check the notebooks before entering lab, and students without written notes in their notebook will not be allowed to enter. During lab, students are expected to record data in ink into the notebook. Data must NEVER be recorded in pencil/or on other books/papers, and later transferred to the notebook. At the end of lab, notebooks must be checked and signed by TAs at the conclusion of each lab session. **NO SIGNATURE, NO CREDIT.**

5. Students who miss lab lecture are not allowed to conduct experiments for the lab session.
6. Safety glasses required at all times in the lab.
7. Dress appropriately. Students will not be allowed in the lab without appropriate clothing.

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- a. No open-toe shoes (flip-flops, sandals, crocs, etc.)
  - b. No shorts/ short skirts
8. No food and drinks allowed in the lab. THIS INCLUDES CHEWING GUM!
  9. Failure to follow safety rules will result in expulsion from the lab with no make-up lab is allowed.
  10. Cleaning up is part of the lab session. Students should stop working and begin cleaning up their work area, including their hood space, 25 minutes before the conclusion of the lab session.
  11. When cleaning glassware: Step 1: Pour out chemicals from glassware into appropriate waste bin. Step 2: Rinse the glassware and pour the rinse into appropriate waste bin, NOT THE SINK. Failure to obey this rule will result in lab technique point deduction.
  12. Preliminary reports of data/results, must be submitted by hand at the time of the completion of each experiment (due dates are announced on icollege every week), and they must be included in the appendix section of the final lab report.
  13. Each student may have up to 1 make-up lab sessions. Authorization is needed from instructors before making up lab.
  14. To pass the lab, students MUST take the lab final and turn in the lab report. Grading point distribution is on page 4 in lab manual. Lab report is due on Week 13 Lab at the beginning of lab lecture, but may be turned in earlier (Week 12 Lab Lecture) for extra credit. It is important that students work on the lab report as experiments progress during the semester. Lab report instructions/samples are on page 5 in the manual. There will be a document on icollege pertaining to lab report. Students are responsible for downloading it as guidance for writing lab reports.
  15. Department Student Integrity Policy is on Pages 4 and 5 of lab manual.  
  
Graded lab notebooks may be picked up from the lab instructor within one semester following the completion of the lab after which time they may be discarded. Graded final exams and final reports can be viewed at the instructor's office but will not be returned to the students.  
  
No grades will be given via e-mail or by phone.

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## To pass this lab:

1. Take the lab final exam (date will be announced).
2. Turn in the lab report before taking final lab exam.
3. Turn in notebook before taking the final lab exam. It is important that students work on the lab report as experiments progress during the semester. Grading distribution is on page 6 of lab manual.

**First Session:** Safety, synthesis assignment, check - in, and crucibles weight experiment.

During our 1st lab, pages for the crucible experiment will be distributed. These will be cut and taped into lab notebook as your first experiment. The instructor will check for these taped pages in your notebook on the second week of lab.

**Sessions 2 through 11:** Preparation and determination of the formula for a cobalt - amino - halide complex and determination concentration of unknowns.

**Session 13:** Final report and lab notebook will be due at this time.

**Session 13:** Final exam and check out.

**\*\*Note:** If you withdraw from the class or stop attending the lab, you still **MUST** check out. If you do not, you will be charged for the procedure to be done without you. **\*\*\***

## Lab Schedule:

Week	Activities
1	Safety (watch video and pg 59 of manual) , synthesis assignments, and check - in. 1st heating, drying, and weighing of Gooch Crucibles
2	Safety exam. Begin Complete Assigned Synthesis Procedure
3	Complete Assigned Synthesis Procedure
4	Weigh and Store Synthesis Product Complete Precipitation and Determination of % Halide
5	<b>Quiz 1</b> Complete Precipitation and Determination of % Halide
6	Weigh Triplicate THAM samples Perform THAM titrations
7	<b>Quiz 2</b> Prepare Boric Acid solutions Setup NH <sub>3</sub> Distillation

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	Distill NH <sub>3</sub> into three Boric Acid Solutions
8	<b>Quiz 3</b> Prepare Boric Acid solutions Setup NH <sub>3</sub> Distillation Distill NH <sub>3</sub> into three Boric Acid Solutions
9	%Co analysis by Spectroscopy
10	<b>Quiz 4</b> Prepare Stock Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution Prepare KIO <sub>3</sub> samples Complete Titrations
11	%H <sub>2</sub> O <sub>2</sub> analysis
12	<b>Quiz 5</b> Make up Lab. Checkout.
13	Hand in final report and notebook. Final Exam. Checkout.