

CHEM 1212K Lab
Summer 2019

Instructor: Dr. Zahra Alghoul
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Office hours		
Monday 3:00 – 3:50 pm	Wednesday 3:00 – 3:50 pm	Or by appointment

Lab Meetings:

Lab Lecture: Tuesday/Thursday 4:00 – 7:25 pm, 327 Classroom South

Laboratory: Tuesday/Thursday 4:00 – 7:25 pm, 3rd floor General Chemistry Lab- Classroom South

Required Materials:

Bound lab notebook

Safety Glasses (may be purchased the first laboratory period)

A scientific nonprogrammable calculator

Text:

GSU Lab manual (to be handed out at first lab lecture).

A course outline, schedule of activities, grading, etc., is included in the lab manual.

Notebook Formatting:

A guideline for the management of the lab notebook is included in the lab manual pages 3-4

Grading:

A guideline for the grading sheet is included in the lab manual on pages 5-6

Final Report:

A guideline for the format of the final report is included in the lab manual on page 62-65.

Missed Labs:

There are no lab make-ups, as per department's policy. There is extra time during the semester for a student to complete all of their lab work even if they miss a week. If an urgent situation occurs and there isn't enough extra time throughout the semester to complete the missed work, please talk to me to make alternative arrangements.

Urgent situations and excused absences include: documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holidays, athletic competitions. If you have another valid reason for missing lab that is not listed here, please communicate it to me.

Communication:

Please use your gsu email to contact me with regards to the lab and write CHEM1212 Lab in the subject line. Send your emails to zalghoul@gsu.edu

Lab Rules:

- Safety glasses or goggles required at all time.
- Lab appropriate attire is mandatory (No shorts, sandals or open-toed shoes)
- No food or drink in the lab.
- Individualized project-type lab. Submitted assignments should be completed by students individually
- A brief background on the experiment and an outline of the procedure should be written in the lab notebook and shown to the instructor or TAs before starting the experiment.
- Notebooks should be kept up to date and laboratory notes and data should be written in ink.
- Notebooks must be signed by TAs or lab instructor at the conclusion of each lab session.
- Quizzes and final exam are closed-book.
- Late lab report submission will not be accepted.
- The preparation/handling of concentrated acids or ammonia solutions must be carried out under the hood. Unused concentrated acids or ammonia solutions must be diluted by adding them to water, under the hood. The amount of water to be used in the dilution depends on the amount of reagent needed to be ACS diluted so it will not fume (about 1 in10 dilution). The diluted solutions will be discarded in the waste drum located in the lab. Glassware used for the preparation/handling of concentrated acids or ammonia solutions must be rinsed with enough water, under the hood, and the combined rinses must then be placed in the waste drum.
- Cleaning up is part of the lab session. Students should stop working and begin cleaning up their work area no later than 20 minutes before the conclusion of the lab session. TAs will be checking every student's work station and points will be deducted for not cleaning up.
- Students must exit the lab by 7:25 pm

Lab Schedule:

06/11	Introduction, check-in, crucibles weigh
06/13	Synthesis Part (1)
06/18	Synthesis Part (2)
06/20	B: prepare HCl stock sol'n; crucibles done
06/25	Quiz #1 and A: % halide Cl or Br
06/27	A: % halide Cl or Br
07/02	C: % amine NH ₃
07/09	Quiz #2 and C: % amine NH ₃
07/11	D: % cobalt Co ⁺³
07/16	Quiz #3 and E/I: prepare Na ₂ S ₂ O ₃ stock sol'n/% H ₂ O ₂ (I)
07/18	Makeup Lab and checkout
07/23	Final Exam. Final Report and Notebook Due.

A.	Analysis for % Halide in a Synthesized Cobalt Compound	23
B.	Preparation and Standardization of HCl Solution	25
C.	Analysis for % NH ₃ Using Standardized 0.3M HCl	26
D.	Visible Spectroscopy Analysis of Cobalt-amine complexes.	29
E.	Preparation and Standardization of 0.1M Na ₂ S ₂ O ₃ Solution	32
I.	Analysis for H ₂ O ₂ in Commercial 3% Solutions	38

Graded final exams, notebooks 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.