

GENERAL CHEMISTRY 1 LAB SCHEDULE, FALL 2009

WEEK	DATES	TOPIC	WRITEUP DUE FOR WEEK #	ASSIGNED READINGS
1	9/1,3	Intro, check-in	-	pp. 2-17
2	9/8,10	The Measurement of Mass and Volume: Density...	-	pp. 19-24
3	9/15,17	The Separation of a Mixture	2 (density)	pp. 25-30
4	9/22,24	Percent Water in a Hydrate	3 (separation)	pp. 31-34
5	9/29,10/1	The Synthesis of Potassium Aluminum Sulfate from Scrap Aluminum	4 (% H ₂ O)	pp. 43-48
6	10/6,8	Separation, Purification, and Identification of a Chemical Mixture	5 (alum)	pp. 35-42
7	10/13,15	Freezing Point and Density of the Solvent	6 (separation)	pp. 49-52
8	10/20,22	Recrystallization of the Solute and IR of the Solvent	7 (fp and density)	pp. 61-64, handout
9	10/27,29	Melting Point, IR, and GC of the Solute	8 (recryst and IR)	pp. 62,63, 85-88
10	11/3,5	Calorimetry, ΔH , and Hess' Law	9 (MP, IR, GC)	pp. 73-84
11	11,10,12	The Atomic Weight of a Metal	10(calorimetry)	pp. 65-68
12	11/17,19	The Nine Bottle Problem	11 (atomic weight)	pp. 53-60
13	11/24,26	no lab	-	-
14	12/1,3	Lab quiz	12 (9bott)	-
15	12/8,10	clean hood/bench, checkout	-	pp. 17

GRADING: The lab component of your grade is 150 points out of the 700 for the course. There will be 11 grades for writeups, 12 points each, and an end of semester lab quiz worth 18 points for 150 points. Students who do not conform to our notions of laboratory etiquette (pp. 10-11 in the lab manual) can expect to have points deducted from their lab score. This can be done either within individual writeups for isolated incidents or as a deduction from the total score for semester-long offenses. In cases where common areas of the lab (balances, melting point apparatus.....) are abused or left messy, an entire lab section may have points deducted.

CHECKLIST FOR LAB REPORTS

All items turned in for a lab grade (unless told otherwise)

- Must be your own work and give proper references for other work cited.
- Must be written in your lab notebook and in ink.
- Must have your name, the experiment name or number, and the date on each page.
- Make two copies of everything: turn one in and keep one copy in your notebook.
- All questions must be answered with complete sentences. If an answer is 'yes' or 'no' or very brief, go on to explain why that is the case in more detail.
- For all calculations, you must show all work and units. Clearly show the answer and make sure it has both proper units and correct significant figures.

Title, Objective, and Approach

- Title is just the title of the experiment you are doing. Objective is a few complete sentences giving the major goals of / reasons for doing the experiment.
- Approach is a few paragraphs at most giving the important points in the procedure, calculations and other parts of the experiment, written in complete sentences. It is a road map (giving overall directions), not a script (giving every detail).

Experimental

- Carefully record data and observations in your notebook as you do the experiment. Make sure to identify which part(s) of the procedure the data etc. belongs to.
- Record units and note any colors, odors, etc. Make a table for large amounts of data.

Report

- See above on questions, showing calculations and citing sources.
- Show a sample calculation for each type of calculation done for the lab (no matter how simple, i.e. average, subtraction, etc.).
- Any graphs should have a title, fill the page, have clearly labeled and linear (or specified scale) axes, clearly show data points and lines, and show result(s).
- The Conclusion is the most important part of the report as it shows your understanding of what you did in lab and for the report. Restate the objectives of the experiment and show how you met them, give important results, compare your results to a literature or accepted value (if possible), discuss possible sources of error and their effect on the results, and generally show what you learned / understand as a result of doing the experiment.

In General

- Your notebook should be a complete record of all you do in lab and outside of it for a particular experiment.
- Think in your lab notebook. Don't be afraid to make mistakes in it (it shows you are working), just cross them out with one line and continue.
- Be prepared before lab and don't wait until the last minute to work on lab reports.
- Please ask your lab instructor if you have questions – we're here to help!