

Guidelines for Writing FORMAL (INQUIRY) AP Chemistry Laboratory Reports
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Your reports will be organized and written in the form of a classic scientific science paper consisting of the following sections in the following order. When submitting typed (word-processor) reports, the text must be in 12 point black font. You must use a SIMPLE font, such as Arial, Calibri, or Times New Roman. Do not use decorative fonts.

Title Page with Abstract

Procedure

Results, including Data and Calculations/Graphs

Each section should be labeled with the heading placed in the left hand margin (except for the title).

1. **Title Page:** Be descriptive and don't worry if the title seems a little lengthy. One word titles, often appropriate for essays, are seldom adequate for lab reports. Place the title at the top middle of the first page. The title page should also include your full name and the full names of those in your lab group, and the date of the lab.

Below Expectations	Meets or Exceeds Expectations
"Salt Solution Density Lab"	"Determination of the Relationship Between the Density and Concentration of Sodium Chloride Solutions"

2. **Abstract:** ***The abstract must be double-spaced.*** There are ***five*** essential components to an abstract:

- ***Background*** – Define important concepts, theories or laws being examined.
- ***Statement of purpose*** – What were you attempting to do in this lab?
- ***Summary of Procedure*** – What methods did you use to complete this investigation? This should be a summary, not a detailed procedure like the one you completed earlier.
- ***Summary of Results*** – What happened? ***Summarize*** observations and results of calculations and graphs.
- ***Significance of Findings*** – What important concepts or theories are reinforced by your results? What experimental errors or limitations might have negatively influenced your results?

The abstract is written in narrative form. It is NOT a list. Do not use fragmented or partial sentences. Write complete thoughts, as if you are having a conversation with the reader. Remember that the abstract goes on the title page!

3. **Procedure:** You should summarize the procedure in point form creating a step by step description in your own words of what you did in the lab. It should begin on the **SECOND** page of your lab report.

Below Expectations	Meets or Exceeds Expectations
"Measure out 10.00 mL of the 5% NaCl solution using a pipet and a graduated cylinder, being careful not to lose any solution. Place the graduated cylinder on an analytical balance and determine its mass to three decimal places. Record the mass in the lab book."	"Using an analytical balance, determine the masses of 10.00 mL samples of each of the solutions of known concentration."

4. **Results:** Results include both data gathered during the lab, observations made, and calculations or graphs completed using the lab data. You should present data in a table. Tables must include the units for the dimensions being measured.

Below Expectations	Meets or Exceeds Expectations	
5% solution = 10.012 g 10% solution = 10.180 g 15% solution = 10.230	Concentration	Mass (g)
	5%	10.012
	10%	10.180
	15%	10.230

All graphs must have the axes labeled with the dimensions being represented, and an appropriate scale chosen for both axes. You should do graphs using Excel or a similar spreadsheet program, which is then included in the appropriate section of the lab report. Calculations should include the fundamental calculation used to solve, as well as the correct units and significant figures.

Below Expectations	Meets or Exceeds Expectations
Density = $10.012 \text{ g}/10.00 \text{ mL} = 1.0012 \text{ g/mL}$ (significant figures error) Density = $10.012/10.00 = 1.001 \text{ g/mL}$ (labels not present in calculation)	Density = m/V (fundamental equation shown) Density = $10.012 \text{ g}/10.00 \text{ mL} = 1.001 \text{ g/mL}$ (labels present throughout calculation, significant figures rules observed)

Grading

Each lab report is worth **40 points**. Lab reports in which the student has plagiarized from an outside source, or from fellow students automatically earns ZERO POINTS for the plagiarized section(s)! Students are expected to work in groups in the lab, but **do their own thinking and writing on their lab reports!** Do not present the argument, "But we worked on it together" if confronted with cheating. If students submit lab reports with identical abstracts, you will receive no credit for the work. The instructor will not make a distinction regarding who did the original writing and who did the copying. In instances of copying, all students involved lose credit. **DO NOT ALLOW OTHER STUDENTS TO COPY YOUR WORK.**

Students who frequently lose points for problems with calculations, sentence structure, punctuation, or spelling are encouraged to have reports proofread by the instructor prior to submitting the lab report for a grade. Your instructor reserves the right to have you re-write your lab report to correct obvious deficiencies prior to grading the report.

Guidelines for Writing QUICK LAB AP Chemistry Laboratory Reports

The guidelines for Quick Lab reports differ from the FORMAL report in the following important ways:

1. The Quick Lab report is hand-written and in most cases will be due the same period that the lab is performed.
2. The Quick Lab report DOES NOT contain a written Procedure section, because the entire procedure is provided to the student in the lab description.
3. The Quick Lab report is worth 24 points, while the Formal Lab report is worth 40 points.

For more detail on the grading policy for the Quick Lab and the Formal Lab, please refer to the lab grading rubric which was provided to you on the first day of class.