**General Chemistry Laboratory Format (25 pts)**

***Although Labs may be performed in class with a partner and data will be shared each student is responsible for their own lab report. Students who submit a group lab report or lab reports that are nearly identical will receive the report score divided by the number of people claiming it is theirs.* Typed Lab Reports are preferred, but handwritten are acceptable. A combination of a mostly typed with handwritten chemical equations and calculations is a practical solution.**

**The following parts should be included in a report in this sequence: (grade point values in parentheses)**

I**.        Title:  Name the report.  Something like “Chemistry Lab Report” is not specific enough. (1)**

**II.      Introduction (or Background):  This should be written in the 3rd person.  This should be several sentences to introduce the lab and background information, ideas, formulas, or chemical equations important to the lab.  Sometimes you may reorganize class materials into a short paragraph.  It is not an abstract and it is not the purpose of the lab. (3)**

**III.    Purpose/Problem: State the problem that you are researching.  What are you trying to accomplish or determine in this lab? (may be a statement(s) beginning with “To…” or may be a question(s)) (2)**

**IV.    Hypothesis:  What is your prediction to the outcome of the lab?  Your hypothesis should be should be a clear, and exact description of what should happen and why. It can be more than one sentence. It may be in a logical format like “if…then...” format. (2)**

**V.      Procedure (written in 1st person.) (3)**

**A.      First list materials, equipment, and size/amounts of everything used.**

**B.      List the steps taken in complete sentences, past tense and first person.  This part should be written clearly enough that anyone could duplicate your experiment.  Do not write what I told you to do but what you did. Include the IV and DV if appropriate.  Include how the DV was monitored.  Were there controls? How was all relevant data recorded and how many trials did you perform?**

**VI.     Data—There may be two types (3)**

**A.      Qualitative- This will involve the 5 senses. You may use pictures or diagrams with an explanation of the images.**

**B.      Quantitave —This is all the raw numerical data.  It should be presented in a labeled table with units of measure and titles and reflect the proper number of significant digits.**

**VII. Data Analysis:  This is where all the calculations will be correctly calculated and presented.  It may be in the form of charts, graphs, tables etc. All graphs and charts should have a title, labels, appropriate data and units. All results should be explained here.  What does the data mean?  Are there patterns in the data?  Identify this and describe it.  If the lab has calculations with it, they should be answered here. (3)**

**VIII. Discussion:(1st person): In paragraph form, discuss your results.  Evaluate the lab and your results.  How do your results compare to the accepted or known value or findings?  Did you think of further questions after completing this lab?  What were the strengths and weaknesses in the set up and methods used?  How would you improve the lab?  Identify and critique procedural mistakes or sources of error (at least 2) that could affect the data.  (3)**

**IX. Conclusion (1st person): In paragraph form, conclude the lab.  Be sure you refer back to the hypothesis and purpose of the lab.  (2)**

**General Report format (3) – Order of sections. Clearly labeled sections. Free of grammar errors, Correct sigfigs. Typed and/or legible. Physical document. Names of writer and lab partner. Date performed, date submitted.Lab reports that contain the following mistakes will be returned without a grade for revision. Refer to these criteria before submitting your report.**

1. **Excessively poor grammar and punctuation that the report makes no sense.**
2. **Missing or extremely incomplete sections (unless I told you to omit a section)**
3. **Required sections out of order**
4. **Title is general and vague**
5. **Scrambled content: Ex: An Introduction/Background that discusses the Problem/Purpose of the lab, A data table that includes calculations, Percent error placed in data analysis rather than Discussion etc.**
6. **Procedure not written in 1st person or includes incomplete sentences**
7. **Data does not include units, or has not been rounded to correct number of significant figures.**
8. **Data not presented in tables**
9. **Data analysis that does not include your calculations**
10. **Results not clearly presented, in a table, graph, chart, etc when applicable**
11. **A conclusion that is only a couple of sentences and does not address the points listed in the general lab format.**