

Lab Report Guidelines

The following is designed to be a general guideline for writing up your lab reports. The first report will be graded more leniently than the rest and quite a few comments will be written as feedback. Please pay attention to these comments as repeated mistakes may result in point deductions for future labs.

Title:

Each lab should have a title which accurately describes the lab that you performed that day. On occasion, I will provide a lab handout that already has a title and you can simply use that title. If no handout is given you may title the experiment yourself provided that it appropriately describes that experiment.

Purpose

This section should be a BRIEF (two sentences will almost always suffice) description of the experiment's objective. What are you trying to determine? Why are you doing this particular lab? What questions are you trying to answer?

Introduction:

The introduction should address background information and content relevant to the experiment that was performed. I will try to give some guiding remarks ahead of time as to what you should address in this section. This section typically should include at least two well-developed paragraphs. You should try to avoid discussing things such as describing, in words, how to perform calculations relevant to the lab, unnecessary historical trivia (e.g. "In 1865 Sir Alexander Hess derived his famous equation relating..."), or other nonrelated content.

Procedure:

This section should be a description of what you actually did in the lab. DO NOT SIMPLY COPY FROM A LAB HANDOUT IF ONE WAS PROVIDED!!! The procedure should be detailed enough so that someone could repeat the lab using your instructions, but not too wordy so as to take up too much space. The accepted convention for the procedure section is third person past tense or passive voice. This will be awkward at first but you will get used to writing in this fashion.

Data:

This section includes anything that you actually measured during the course of an experiment and is almost always presented in the form of tables or graphs. Do not

include calculations in this section (they will be in a separate section). On occasion, we will be using more advanced equipment which will do the data collection for you. If this is the case there is no need to recopy the data from the instrument. I will provide instructions related to how you should present your data for these specific scenarios. In addition, it will be necessary to produce Excel graphs to analyze or present your data.

One last note regarding data: You must never begin a sentence with a numeral. Also, it is not acceptable to just write the number out in word format, the sentence must be rearranged if necessary. E.g. To the flask was added 25.0 mL of HCl NOT 25.0 mL of HCl was added to the flask.

Also, numbers with a value less than one must have a zero as a place holder in the one's place. (0.49 NOT .49) If MS Excel is used to create the tables, you must change the settings to force it to display it correctly. While this may seem picky, there is a correct way and incorrect way to do things and we must do it the correct way.

Calculations:

Most of the experiments that you perform in this class will involve some type of calculation at the end. You need to report one sample calculation for each type of calculation required for that particular experiment. If three trials are done you do not need to report the same calculation three times. One sample will do.

Results & Conclusions:

Did your experiment go well? Did you get close to the accepted value for whatever you were studying? These are the types of questions which must be answered in the results and conclusions section. IN ADDITION, YOU MUST ALWAYS COMMENT ON POSSIBLE SOURCES OF ERROR FOR EVERY EXPERIMENT. Unacceptable answers are calculator error, human error, or instrument error. You must think about possible places where error entered into the experiment. If it is possible to calculate the percent error within the experiment it must be reported here.