**Formal Laboratory Report**

The laboratory report is a formal report of the experiment performed. The report conveys what you have done in a concise, organized and easy to read fashion. It should be written in the past tense using the passive (3rd person neutral) voice. The following sections should be clearly labeled and contain the appropriate information in paragraph style (use of complete sentences: using correct grammar and sentence structure are required). Keep in mind that the lab report must be written so that another competent peer can reproduce the experiment. The report must be typed using double spacing.

**Title Page:** Required for submission. Include a header on each page with your name (last, first). Include:

Title of experiment

Student name

Group member names

Course Title

Instructor Name

Submission Date

**Abstract:** Summarizes the report. This section should not be longer than 250 words. Include a short statement of the background information or main topic of the lab report. Clearly state the purpose of the study. Report the main result verbally and numerically and state whether the experiment gave the expected results and if not, why.

**Introduction:** Gives background information for understanding the rest of the report. About one page. Keep in mind your audience and organize your thoughts in a logical fashion. Include a broad description of the general topic of the report that includes definitions and any pertinent equations with citations. Progressively narrow your explanations to a more specific discussion of the studied topic including again any definitions or equations. The last paragraph should be a brief description of the current experiment as it pertains to the theory described. Any balanced chemical equations or mathematical equations need to be centered on a new line and numbered on the right hand side. Any figures (charts or diagrams of equipment) must be numbered with a caption. All definitions, equations, or information that was found from another source such as the textbook, laboratory document from Blackboard, or internet sites MUST be referenced with a number. Do not include procedure information.

**Experimental**

**Reagents:** list of reagents used including manufacturer, concentrations or any pertinent details regrading materials used.

**Procedure:** Write in paragraph form, in past tense, 3rd person neutral. Include actual values used in the experiment (masses of reagents, volumes of solutions, etc.). Write in your words and be specific in your description. Do not include any calculations, observations, results, or data analysis information.

**Data:** Use charts, graphs, and tables to organize your data in clearly labeled sections. Number and title every table. Have a caption for every chart or graph. An example of the calculations or formulas should be provided. Any outside information must be referenced properly. Do not include any interpretation or opinions.

**Results & Discussion:** This is the most important section of the report and should be at least one page long. State the main result of the lab with standard deviation correctly calculated. Since you do not have an expected value so % error or % yield cannot be discussed. However, discuss any sources of error that might have occurred. Comment on how you might have improved your results either in manipulation or by choosing a different method. Reference the theory in the introduction to help explain what happened and why.

**Conclusion:** Summarize the main ideas of the discussion and restate the result of the experiment.

**References:** Number and order references according to when they were used in the text. Cite sources using ACS or APA format.