
Mini-Report 5 – Results / Calculations

The “results / calculations” section of an experiment report is the section in which a scientist communicates the specific results (including all numeric data) of the experiments performed and also shows any values that can be calculated from the numeric data obtained. The “results / calculations” section should be free of opinion. This allows another scientist to view the data obtained from the experiment without being biased by the author’s own opinion of the experiment performed. Any commentary about whether the experiment was successful or what should be done differently is NOT included in this section of the report. Any conclusions that are not immediately obvious from the data given should also be excluded from this section. (For example, it’s alright to state that the percent yield was “98.6%,” but it is not alright to state that “this percent yield proves that mass is conserved for this specific reaction.” Not only is this an opinion, but there is no obvious equation for “proof”.)

Experimental data obtained may be presented in a variety of ways. If an experiment or calculation is done only one time, the data is typically mentioned in the text. If an experiment or calculation is repeated, however, the data is typically given in a table. Sometimes graphs are also made from the data obtained during the experiment. Any graph or table must be numbered and a caption must be provided that explains what the graph or table represents. Graphs and tables are numbered independently. (Example: a report may include a “Table 1,” a “Figure 1,” and an “Equation 1.” The first table is called “Table 1” and the first graph is called “Figure 1,” even if these are unrelated).

Any equations that were solved are also explicitly shown (and numbered) within this section. You should also show a “sample calculation” in which your data has been plugged into the equation and the answer is shown so that a reader can see how your data is used to reach the final answer. If an equation is used more than one time, then only one sample calculation should be shown. If a calculation is very obvious (for example, taking an average), then it may be omitted completely. Consult your instructor as to what calculations are “very obvious.” When in doubt, include the equation!

Any tables, figures, equations, etc. that you have numbered MUST be explicitly mentioned in the text. Imagine that these tables, figures, equations, etc. are NOT a part of your report. Instead, the text of the report should discuss the results and calculations and then refer to the tables, figures, and equations in which those results can be found. The reader is expected to “find” the table, figure, or equation as it is mentioned in the text. (Example: “The mass of each metal was converted to moles using *Equation 1*, and the results were graphed versus heat capacity, as shown in *Figure 1*.”)

Instructions:

Write a results / calculations section for the lab that you just completed. It must be double spaced, 12 point font, and should have your name on it. If you use any references to write your results / calculations section, they should be cited in a separate “references” section.