Final Lab Report

Your final assignment for this class, which is worth two (2) assignment grades, is to write a formal lab report of the “Science and wine” experiment that you preformed in class with the various sweeteners. You will need to use Microsoft Office Word and Excel or Apples iWork to complete this assignment. For this lab you need to e-mail in to **ADAM.LUNDQUIST@NN.K12.VA.US** a word document that contains the following information. The rubric is on the adjacent page.

**Names**

On the first line of the document put your name.

**Title:**

On the second line of the document put your title. Your title should be scientific and define the variables you tested.

**Introduction**

In the previous assignment you were to research five (5) sources and turn in an annotated bibliography. To start your paper use those sources (or others) to give me some background knowledge of fermentation, wine, yeast, etc. Assume that I already know everything I lectured on in class, so stick to things that pertain to the sweetener you choose, and interesting information you found. Your paragraph(s) should have a coherent thought that leads to your hypothesis: you choose a sweetener for a reason, provide research and ideas behind what you thought would be the “best” sweetener. Your paragraph should end with the hypothesis you tested in lab.

**Methodology**

BREIFLY describe how you collected your data. This shouldn’t be a step by step procedure, but rather a quick fly-by of the process. Avoid using first person narrative when writing this paragraph. Your paragraph should outline key steps: what sweetener did you use; how much; how much yeast did you use; how long did the experiment run; what temperature?

**Data**

Provide an *analysis of the data* you collected during your lab. Your data should only be summarized in this section, with NO conclusions drawn. An example of analyzed data would be the average of a trial, or the rate of one sweetener verses another, did you have a dud? You must decide what form your data should take, should you put it in a table or a graph? ***The average of your three trials against the 45oC data at cnubio.weebly.com.*** Use Excel to create your graphs and tables than drag and drop them into word. You may give them their own page in the document or have the be tightly text wrapped

**Conclusion**

Here is where you tell me WHY? Start by either supporting or rejecting your hypothesis. Why did you capture more carbon dioxide from one sweetener than you did from another? Why do you think the rate of one sweetener was greater than the other? I know this is not your major so use the clues I gave you last assignment (and below) to figure out why one sweetener out preformed another. Relate all this back to your research, and tell us what future research could be done to support your results and conclusions.

**Citations:**

You need a minimum of three (3) sources for your paper; your sources should be cited properly, but DO NOT need to be annotated.

SAVE YOUR FILE AS: FINAL your-last-name time-of-class abbreviation-for-day

Day abbreviations are Monday (M), Tuesday (T), Wednesday (W), Thursday (R).

Class meet either at 6 or 8

so If I were to save my data for a class that meets on Mondays at 8 it would look as follows:

FINAL Lundquist 8 M.docx

Email your file to [ADAM.LUNDQUIST@NN.K12.VA.US](mailto:ADAM.LUNDQUIST@NN.K12.VA.US)   
with the subject: FINAL your-last-name

Buzz words to aid you in explaining your results and either support or reject the hypothesis:

* Fermentation
* Yeast
* Enzymes
  + “Lock & Key” model
  + Optimal temperatures
  + Denaturing
* Sucrose (table sugar)
* ONE of the following
  + Glucose
  + Mannitol
  + Splenda

**Things that drive me crazy and will deduct a point from your score:**

* **-**direct quotes.
* -abbreviating carbon dioxide without denoting it first.
* Buzz word dropping (example: This is because of the lock and key method. – what????)
* Proving a hypothesis

**Final Paper Rubric Student:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| --- | --- | --- |
|  | **Criteria** | **Comments** |
| **Introduction** | 1. Paragraph provides additional background knowledge of the experiment  2. In text citation utilized correctly (author, year). If more than 1 author use the first author followed by “et al.”  3. Paragraph flows easily from one point to the next. It is more than just a collection of random trivia  4. Background information relates to the variables in the experiment  5. ends with a hypothesis. |  |
| **Methodology** | 1. paragraph is concise, and does not go into step by step detail  2. Is a paragraph  3. Experiment could be reproduced by the instructor or students familiar with the procedure. |  |
| **Data** | 1. Data is Analyzed, raw data is NOT provided  2. graph/tables have titles, figure or table numbers, and samples sizes  3. paragraph does not attempt to draw conclusions  4. paragraph is concise and does not go over every data point collected  5. correct graph is utilized/table clarifies the data |  |
| **Conclusion** | 1. Conclusion based on data NOT on research  2. Conclusion explains WHY the data says what it does  3. Conclusions are validated by research; or if contradict research a possible reason is given for why  4. Conclusions are explained in sufficient detail to explain data and demonstrate an understanding of the concepts being utilized in the lab.  5. Future experimentation is suggested that corresponds to the data and conclusions drawn |  |
| **Citations** | 1. 3 sources present  2. 2 sources present  3. 1 source present  4. citations done correctly  5. NOT Annotated |  |

**Grade update:**

Assignments (60%): \_\_\_\_\_\_\_\_

Quizzes (20%): \_\_\_\_\_\_\_\_

Presentation (10%) \_\_\_\_\_\_\_\_

**FINAL GRADE:** \_\_\_\_\_\_\_\_