

Lab Report

Cellular Respiration

Spring 2010 Hawthorne

Please refer to the “How to Write a Laboratory Report” section on page 167 of your Lab Manual. This section describes the format of a lab report and how to go about writing one.

A few comments about the Cellular Respiration Lab:

- This lab monitors the production of CO₂ as a gas.
- The production of CO₂ is indicative of anaerobic respiration (Glucose → carbon dioxide and ethyl alcohol)
- You will determine the effect of pH on the rate of fermentation (a word interchangeable with anaerobic respiration)
- We will not do Part II. Therefore the Lab report will only be on Part 1.
- You will have 2 graphs that you will need to produce using Excel or some other spreadsheet software program for

Lab Reports

- You don't need a cover page (save paper)

Introduction

- This is more in depth than the objective from the lab notebook
- Should include the **objective**
- Should include your **hypotheses** spelled out
- Includes **background** information (what do we already know about the science) and some tie in to the world outside the laboratory (why should people care about respiration)
- You can reference your textbook and other outside sources

Materials and Methods

- This will NOT be in a bullet point list. It needs to be written out in complete sentences and you will refer to individual pieces of equipment and supplies as you use them.
- Don't copy the lab manual
- Summarize your methods in your own words

Results

- Very much like the results in the lab notebook.
- You will have 2 or 3 tables and 2 or 3 graphs (figures).
- You will also need to be able to discuss the results in words.
- This is everything that you see

Conclusions

- Interpret your results (in other words explain what they mean)
- You will want to restate your hypotheses here and explain whether or not your results match AND why you think this is the case
- You may refer to outside sources here

References

- In text the format is
 - Single author (Last Name, Year)
 - Two authors (Last Name & Last Name, Year)
 - More than 2 authors (Last Name et. al., Year)
 - Multiple references at once (Last Name, 2009; Last Name 2008; Last Name 2007)
 - List papers chronologically with the most recent date first
- At the end it is
 - Hawthorne, White, Stark, Hagar, Bennett, Vaillancourt (2010). Biology 111 Lab Manual Spring 2010. 33-28. {This is the lab manual reference}
 - Campbell, Reece, Urry, Cain, Wasserman, Minorsky, Jackson (2008). Biology. Eighth Edition. 162-184. {This is the textbook}
 - Periods go between each section.
 - List ALL authors. Don't use et. al. in the references section.
 - The numbers at the end are Edition(volume):Page numbers
 - The article title is NOT underlined and it is in sentence case.
- Wikipedia is NOT an acceptable resource but it can link you to other resources

Figures and Tables

- All figures and tables need a meaningful title. (Meaningful = if I take the table from your lab and show it to someone walking down the hall who has not taken Bio 111 they should understand what the table is talking about.)
- All figures and tables should also be numbered in the order that they are presented in the text
- It is perfectly acceptable to reference your figures and tables by number in the text of your results but attach them in an appendix at the end of the paper.