

You have been asked to write a lab report on a certain lab exercise. The objectives of this request are to:

- help clarify the exercise in your mind, and
- provide an opportunity to help you improve your analytical thinking and your writing.

Be sure to label and include the following elements:

**1. Authorship:**

- Your name
- The date
- The course (Micr-22)
- Your lab meeting times

**2. Introduction:**

Introduce your reader to the topic. Consider including a history of investigation, applications of the ideas, or importance of the topic. Reach broadly enough to fill about one page. Outside sources (and citations) will be useful here.

Include your hypothesis at the end of the introduction. This is a tentative assumption or educated guess as to what the experimental outcomes will be, or a suggested solution based on your introductory evidence. One tricky part of writing a good hypothesis is being sure that your hypothesis is *falsifiable* in the exercise. For example, the hypothesis that “all microbiologists are right-handed” can be falsified by observing a single left-handed microbiologist. It may be helpful to try using words like “all,” “none,” “never,” or “always.”

**3. Procedures:**

Give enough information so that any Micr-22 student could duplicate the exercise without needing further instructions. Write this in your own words, and provide all the specific details needed, such as materials or equipment you used. Include any organisms you used, with their proper un-abbreviated species names.

**4. Results:**

Report your actual results in depth, not what was “supposed” to happen. Tables and labeled diagrams may be useful. Any observations relevant to the experiment will be helpful.

**5. Discussion:**

This is the most important part of your report. Excellent microbiologists will analyze their results and then broaden their perspective back to the rest of the world. Outside sources will again be useful.

Be sure to address these questions:

- Was your hypothesis supported by your results?
- Why do you think the exercise turned out the way it did?
- What are possible explanations for unexpected results?
- How might someone apply your information in a real-life situation?
- What further questions come to mind?

## 6. Recommendations:

This is an opportunity to make suggestions about how the exercise might be improved for future students.

## 7. Works Cited:

The best research builds from recent, relevant, high-quality information. Your report will need support from at least three outside sources, not including our textbook or lab manual. To demonstrate that you've thought about the trustworthiness of your sources, please annotate each with a brief explanation of why you believe the source to be credible. If you do not already have a favorite citation format, please use CSE citation format ([http://writing.wisc.edu/Handbook/DocCSE\\_NameYear.html](http://writing.wisc.edu/Handbook/DocCSE_NameYear.html)).

Example citation with annotation:

Briggs, C. 2014. Glass blowers and their exposure to thermophilic *Escherichia* in molten products. *Journal of Interesting-Sounding Example Studies*, 31(2): 123-125.

- I believe this source is credible because I wrote it. (not so good)
- I believe this source is credible because it was published in a peer-reviewed journal, contact information is given for the author, and no conflicts of interest are evident. (better)

Potential sources:

- Peer-reviewed journals (our library has lists of research tools to access these)
- Reputable websites (consider our library's handout on evaluating websites)
- Our textbook (note the specific pages you used)
- Our lab manual (again, note specific pages)

## Formatting:

- Double-spaced
- Times New Roman font, 12pt.
- Double-sided printing is fine
- No cover needed – just staple one corner, please

Our Writing Center is available to help you! Visit building 26B, room 1561.

