# Exercise I.

## Complete the table below to create a Quick Facts guide to your protocol.

|  |  |
| --- | --- |
| Null Hypothesis: |  |
| Alternative Hypothesis: |  |
| Dependent Variable (DV): |  |
| Independent Variable (IV): |  |
| Confounding variables: |  |
| Timing: |  |
| Number of trials? |  |
| How will you measure a “control” for comparison? |  |
| Statistics to use: |  |
| Graph to make: |  |

## For the titration, complete the table below:

|  |
| --- |
| Type of Reaction: |
| Fill the Burette with: |
| Fill the flask with: |
| Which is the Acid |
| Which is the Base |
| What is the indicator |

## Provide a brief summary of your protocol. The details of the general methods are in the next exercise. This is about the variable YOU will test:

Brief summary…

# Exercise II.

Insert (copy/paste) your individual data table from excel.

## **[here]**

Insert (copy/paste) your class data table from excel.

## **[here]**

Describe your complete t-test results (means of each group, standard error, t-value, degrees of freedom, p-value)

(means of each group, standard error, t-value, degrees of freedom, p-value)

## Copy/paste your bar graph from Excel.

## **[here]**

## Answer the following questions

1. Rewrite your hypothesis:
2. Did you accept or reject your null hypothesis? Why or why not?
3. Was there support for your alternative hypothesis?
4. Why did we use an unpaired t-test to test this hypothesis?
5. Do you think these results are valid and reliable? How could this experiment have been improved?
6. How can you link your results to the cellular process of aerobic respiration?