Spontaneous Generation Lab

In class we discussed the theory of spontaneous generation and Francesco Redi's experiments to disprove that theory. We also saw Louis Pasteur's method as well. Now we get to prove spontaneous generation false ourselves!

Materials

1. 2 quart-sized freezer ziplock bags
2. Chicken stock 300 mL
3. A large cup or glass to put one of the chicken stock bags in

Spontaneous Generation Scientific Method Steps

1. **Question:** What is the question you are studying in this experiment? What is the problem that has been posed?

2. **Research:** What other ways have people analyzed this question? There should be at least two.

3. **Hypothesis:** What do you think you will prove by this experiment?

4. **Experiment**: Perform the experiment outlined on the next page, and describe your results here. If you ran into any problems, please explain how you adjusted.

5. **Analysis:** What do the results of the experiment tell us?

6. **Conclusion:** Did the experiment confirm your hypothesis, or disprove it? Please explain.

7. **Extra credit:** For those completed early, please explain the differences between Redi's and Pasteur's experiments.

Experiment Steps

1. Mark one ziplock bag CONTROL and another ziplock bag mark as VARIABLE.

2. Measure 150 ml of chicken stock and place into the CONTROL bag, and zip it closed. Go to a sink and turn the bag upside down to verify that it is tightly closed. Do again for the VARIABLE bag.

3. In a large pot, bring a water to a boil.

4. Place the CONTROL and VARIABLE bags into the boiling water, and boil for 10 minutes.

5. With a pair of tongs, take the CONTROL and VARIABLE bags out of the pot and place on a plate and allow to cool for 10 minutes.

6. Take the VARIABLE bag and place it into a large glass, so that the liquid portion is fits completely in the glass easily. Then open the VARIABLE bag so that the chicken stock inside is exposed to the air.

7. Find a location to store the VARIABLE bag/glass and the CONTROL ziplock bag side by side. They should remain there for 1 week.

8. Mark the date and time you put the bags in their location.