

Glue this side
down into your
science notebook.

“A dot is a lot!”

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Conservation of Mass

Procedure - Part 1:

1. Using your graduated cylinder, measure **50 mL** of vinegar.
2. Add the vinegar to your 125 mL Erlenmeyer flask.
3. Stretch your balloon out for about a minute so that it will inflate easily.
4. Using the white plastic spoon, add **2 level teaspoons** of baking soda to your balloon. Use the paper funnel to avoid spilling.
5. While keeping all the baking soda in the balloon, carefully place the mouth of the balloon over the opening of the Erlenmeyer flask to make a tight seal. The balloon will hang to the side of the flask. **Record/draw observations.**
6. Using your Triple Beam Balance (TBB), find the mass of the closed system. (Flask, vinegar, balloon, and baking soda) **Record the mass in the data table.**
7. With the balloon still **attached** to the flask, firmly hold where the balloon is attached to the flask and lift the balloon so that the baking soda falls into the flask and combines with the vinegar. Swirl gently.
8. **Record/draw all observations.**

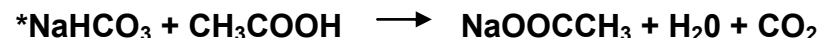


My Observations: Before/During/After

The “**Law of Conservation of Mass**” states that when matter goes through a physical or chemical change, the amount of matter stays the same before and after the changes occur. In other words, matter cannot be created or destroyed.

Analysis and Results:

Look at the chemical equation below:



- Name the reactants
- Name the products
- Name the gas produced

Procedure - Part 2:

1. Using your TBB, **find the mass** of the closed system once the chemical reaction has completed. Be sure to keep balloon attached.
2. Record the info into the data table below.
3. Carefully remove the balloon and let all the gases escape.
4. Place the deflated balloon back onto the Erlenmeyer flask.
5. **Find the mass** again using your TBB.
6. Record your info into the data table above.

1. Compare the mass of the closed system before and after the reaction. Explain your results.
2. Were any new elements introduced into the closed system? Where did the gas come from? Explain.
3. What evidence did you observe to indicate that a chemical reaction took place?
4. After the gas was released, what happened to the mass of the system and why?
5. Did your results support this statement? Why/Why Not?

Mass of System Start (g)	Mass of System End (g)	Mass of System Gas Released (g)

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Conclusion:

2-3 sentences on what you learned in this experiment.