Lab: Law of Conservation of Mass 

Procedure:

1. Mass a plastic baggie and record in your data table.
2. Mass approximately 10.0g of sodium hydrogen carbonate and add it to the baggie. Reweigh the baggie and the sodium hydrogen carbonate and record in your data table.
3. Place a cup on the balance and re-zero the balance. Pour in approximately 10.0g of acetic acid solution. Record the exact mass.
4. Swiftly pour the acetic acid into the baggie and reseal quickly.
5. Allow reaction to occur.
6. Carefully open the baggie and allow all the gas to escape. Reseal the baggie.
7. Mass the baggie one more time.
8. Open the baggie, pour the contents down the sink and throw away the baggie.

Data Table:

|  |  |
| --- | --- |
|  | Mass |
| Empty baggie |  |
| Baggie + sodium hydrogen carbonate |  |
| Acetic acid |  |
| Baggie + reacted contents |  |

Analysis:

1. Calculate the mass of the sodium hydrogen carbonate.
2. Write the equation for the reaction of acetic acid and sodium hydrogen carbonate.
3. Calculate the mass of sodium acetate and water combined.
4. Calculate the mass of carbon dioxide released.

Conclusion:

1. Describe the Law of Conservation of Mass.
2. How does the Law of Conservation of Mass apply to this experiment.