

## CHEMISTRY LAB

Lab Report: Percent Sugar in Bubble Gum

Names:

**Problem:** What percent of bubble gum is sugar?**Hypothesis:****Experiment:****Materials:**

- 5 pieces of sugared bubble gum
- paper cup
- balance

**Procedure:**

1. Use a balance to determine the mass of a clean paper cup. Record the mass in your data table.
2. Unwrap 5 pieces of bubble gum containing sugar and place them in the cup.
3. Determine the mass of the cup and the gum. Record the mass in your data table.
4. Each person in the group should chew a piece of gum to remove the sugar.
5. After about 5 minutes, collect the chewed gum in the massed cup and wash your hands.
6. Determine the mass of the cup and gum. Record it in your data table.
7. Calculate the mass of sugar dissolved from the gum (original mass of gum – final mass of gum). Record the answer in your data table.
8. Calculate the percentage of sugar in the gum by dividing the mass of the dissolved sugar by the mass of the unchewed gum and multiply by 100. Record the answer in your data table.

**Data:**

Mass of Paper Cup	Mass of Cup + Gum	Mass of Unchewed Gum	Mass of Cup + Chewed Gum	Mass of Chewed Gum	Mass of sugar	Percent of Sugar

**Conclusions:**

1. What is the percent of sugar? (Show calculations below.) \_\_\_\_\_

2. What is the molar mass of the sugar,  $C_{12}H_{22}O_{11}$ ? (Show your work below.) \_\_\_\_\_

3. Convert the mass of dissolved sugar to moles. (Show your work below.) \_\_\_\_\_

4. How many molecules of sugar are in the dissolved sugar? (Show your work below.) \_\_\_\_\_

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