**Percent Composition Lab– Oreo Activity**

**Is Double Stuffed REALLY Double Stuffed?**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

****

A specific brand of cookie (beginning with the letter O made by Mr. C) claims that their double-stuffed cookie contains twice the amount of filling as their regular brand. But is this claim really true? To better understand the concept of Percent Composition, we are going to study Mr. C’s claim.

**PURPOSE:** To determine if double stuffed cookies contain twice the amount of creamy goodness.

**HYPOTHESIS: If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**MATERIALS:**

* **1 regular Oreo**
* **1 double stuffed Oreo**
* **Balance**
* **Knife**
* **Napkin**

**PROCEDURE:**

**DATA TABLE:**

**Regular Oreo \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **% Wafer % Filling**

 **Double Stuffed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Oreo % Wafer % Filling**

**CONCLUSION:**

1. Was your hypothesis supported or disproven? ***Explain how you know***.
2. In order to answer Question 1, did you use the mass of the cream filling ***OR*** % composition of the cream filling? *Explain your reasoning*.
3. Come up with a formula to explain how you can find percent composition using mass.
4. How is Percent Composition of a molecule by atoms different then Percent Composition of a molecule by mass of? *Explain using a molecule as an example.*

|  |
| --- |
| **EXTRA QUESTIONS** |

Find the *percent composition by mass* of the **bold atom and ONLY the bold atoms** in the following compounds:

1. Ammonium phosphate – **(Hydrogen)**
2. Mg(N**O3**)2
3. Potassium permanganate – **(Oxygen)**
4. **Calcium** hydroxide