Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period \_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_

Percent Composition of Oreo Cookies

Purpose: 1. To determine whether the Double Stuf Oreos are really double the stuffing and 2. To use percent composition in a meaningful way

Procedure:

1. Using a protective piece of paper on the balance, find the mass of one Oreo cookie to the nearest 0.01g. Record this mass.
2. Carefully separate the Oreo into 2 parts, the filling and the outer cookies
3. Find the mass of the outer cookie and record.
4. Repeat steps 1-3 using the Double Stuf Oreo

|  |  |  |  |
| --- | --- | --- | --- |
|  | Mass of whole cookie (g) | Mass of outer cookie (g) | Mass of filling (g)[By subtraction] |
| Regular Oreo |  |  |  |
| Double Stuf Oreo |  |  |  |

Analysis: SHOW ALL OF YOUR WORK! NO WORK = NO CREDIT

1. Calculate the percent composition of a regular Oreo cookie.
2. Calculate the percent composition of a Double Stuf Oreo cookie.
3. Compare your percentages from questions #1 and #2. What do you notice?
4. Compare the MASS of the stuffing of the two types of cookies. Are the Double Stuf’s really twice as much filling as the regular cookies?
5. Based on the name “Double Stuf” and your findings in question #4, which do you think is correct? Why?