Lab 10: Percent Composition

Materials:

various pieces of gum with different brands

scale

weighing papers

Procedure:

1. Obtain one piece of each brand of gum. Look at the ingredients on the package of gum to determine the sweetener. In a chart, record the sweetener for each gum.
2. Unwrap a piece of gum and weigh it on a scale ON A PIECE OF WEIGHING PAPER!! Do not put the gum directly on the scale. Record the initial mass of each piece of gum in your chart.
3. Chew each piece of gum for 5 minutes.
4. After 10 minutes, put the piece of gum back on the weighing paper and get the final mass of each piece of gum. Record the data in your chart.
5. Subtract you the final mass from the initial mass to get the mass of sweetener that you ingested.
6. Using the mass of the sweetener and the mass of the gum, calculate the mass percent of sweetener in each type of gum.

Data:

Your data chart should look like the one below and should be WRITTEN in you lab notebook!

Type of Gum	Sweetener	Initial Mass	Final Mass	Mass of Sweetener	Mass % Sweetener

Questions:

1. Write the molecular formula for each sweetener.
2. Calculate the molar mass of each sweetener.
3. Determine the number of moles of sweetener in each piece of gum.
4. Determine the number of molecules of sweetener in each piece of gum.
5. List 3 problems with the accuracy of this experiment.