

Kitchen Chemistry

name: _____

As a review of our chemistry unit, I would like you to conduct the following experiment. This was an activity that we were going to do in class at the end of our unit, but now you will have to complete it for 'homework'. Please make sure you follow the instructions carefully and practice safe chemistry at home. I also have a few suggestions for you...

- 1) Try this experiment A LOT and add extra substances! The more you try it, the more your family will appreciate your kitchen chemistry culinary crafts.
- 2) I STRONGLY urge you to try it on the morning of Sunday, May 10th. Your mom will really appreciate you working on your 'homework'.
- 3) Take pictures of your work. I want to see your creative chemical observations.

Purpose: To create an edible foam (gas in a liquid or solid) colloid at home.

Hypothesis: I predict that heat will create a chemical change from a liquid to a solid.

Materials: For this experiment, you will need the following materials,

- stove top
- spatula
- frying pan
- mixing bowl
- utensils (fork & knife)
- plate
- 1 ½ cups of $C_{18}H_{34}O_{13}$, otherwise known as all-purpose flour
- 3 ½ teaspoons of $NaHCO_3$ (Sodium Hydrogencarbonate) = Baking Powder
- 1 teaspoon $NaCl$ (Sodium Chloride) = Salt
- 1 tablespoon of $C_{12}H_{22}O_{11}$ = White Sugar
- 1 ¼ cups of a Colloid called Milk
- 1 Emulsifier called an egg
- 3 Tablespoons of liquid $C_{15}H_{18}Cl_8O_2$, otherwise known as melted butter
- OPTIONAL: a cup of Cyanococcus (Blueberries)

- Procedures:**
- 1) In a large bowl, mix together the flour, baking powder, salt, and sugar. Try to make the mixture as homogeneous as possible.
 - 2) Make a well in the center of the dry mixture. Pour in the milk, egg, and melted butter. Mix until smooth, or as homogeneous as possible.
 - 3) Heat a lightly oiled frying pan with medium heat. Scoop a ¼ cup of the mixture onto the heated pan. Heat thoroughly.
 - 4) Flip the heated substance over to make sure it is brown on each side.
 - 5) Serve hot!

Observations: Take pictures. I want to see what your foam colloids look like.

Bonus: This experiment makes 8 servings. Use your knowledge of ratios and fractions to double it (16 servings) or triple it (24 servings). Remember, MATH IS EVERYWHERE!!!