KITCHEN CHEMISTRY: CAKE EXPERIMENT

SUPPLIES:

For each cake:
6 Tablespoons flour
3 Tablespoons sugar
1 pinch salt
2 or 3 pinches baking powder
2 Tablespoons milk
2 Tablespoons oil
1/4 teaspoon vanilla
Plus:
1/3 of a large egg (break egg into a cup; beat until well mixed, use approx. 1 T per recipe below)
Ramekins or cup cake liners/cup cake pan
Marker and/or tape

Directions:

1. Preheat the oven to 350 degrees F.
2. Grease and flour 4 ramekins (about 8-12 ounce size) or fill 4 muffin cups with paper liners.
3. Label ramekins or liners with a marker/tape with the numbers 1-4.
4. In separate bowls, mix the batter for each cake individually using the following method: Mix the dry ingredients in the order listed, then add the wet ingredients in the order listed leaving out the proper ingredient for each cake (see directions for each cake).
5. Mix well and pour into prepared ramekin or liner.

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DIRECTIONS FOR EACH CAKE

CAKE 1: MAKE WITH ALL THE INGREDIENTS
CAKE 2: LEAVE OUT THE OIL
CAKE 3: LEAVE OUT THE EGG
CAKE 4: LEAVE OUT THE BAKING POWDER

Directions:

Bake cakes for 15-20 minutes.

After the cakes are cooled, remove them from the ramekins/muffin pan and cut each of them in half. Observe the difference in size, texture, appearance, etc.

They are all edible, so you can taste each one and see which tastes the best. Discuss why each cake is different and what the purpose is of each ingredient in the cake.

The purpose of the oil in a cake: Fat, oil in this recipe, in baked goods makes them more moist and tender.
The purpose of the eggs in a cake: Eggs add structure, richness, leavening, color and flavor to baked products.
The purpose of the baking powder in a cake: Baking powder is a leavener. This makes the cake rise. The more it rises, the more light and tender the finished product will be.

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