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*Kitchen Chemistry 101: Fluffy Pancakes*

The purpose of this experiment was to create a fluffy pancake by adding extra amounts of either baking powder or baking soda (sodium bicarbonate). Pancakes are a favorite breakfast food so I researched how to make light, fluffy pancakes.

I tried to solve whether or not baking soda makes pancakes fluffier. I did this by adding incremental amounts of baking soda and baking powder. I hypothesized that adding more baking soda to the lactic acid in the batter would make a better pancake than adding more baking powder.

I attempted to break down the making of pancakes to its basic chemistry. Adding sodium bicarbonate to lactic acid forms water, carbon dioxide, and sodium lactate. I added increasing amounts of sodium bicarbonate to create more carbon dioxide, thus making a fluffier pancake.

While additional baking soda formed fluffier pancakes, the results were not as good as pancakes with additional amounts of baking powder. These showed growth for two out of three batches when compared to baking soda. The baking powder pancake heights were: 13.123 mm, 9.948 mm, and 12.758 mm. The baking soda pancakes heights were 11.723 mm, 12.171 mm, and 11.430 mm. Measurements were performed in inches, then converted to millimeters using a standard conversion of 0.125 in = 3.127 mm.

While pancakes can be made fluffier by adding additional baking soda, those pancakes were extremely bitter tasting. Although adding baking soda made fluffier pancakes, the hypothesis had to be rejected because baking powder made even fluffier pancakes. Breaking down any cooking project to basic chemistry can have positive results.