How does baking powder affect the height and taste of biscuits?

To understand why baking powder is used in biscuits, and the chemistry of how and why it affects the recipe.

I predict that the batch of biscuits with no baking powder will not rise or taste as good as the other biscuits. the batch with the “right” amount of baking powder will be fluffy and light. The batch with two times the needed amount of baking powder will be extra fluffy and light. I think it will also be larger than the other batches.

Baking powder is a mix of baking soda and one or two dry acids. When the baking powder gets damp, the acid and baking soda will mix. This makes a reaction that results in carbon dioxide gas. Amagine it as a tiny science experiment happening in your dough. The gas bubbles get trapped in the dough, making it rise. Recipes need baking powder when lift is needed. If you have once forgotten the baking powder when making muffins, you learned the hard way just how important it is.

materials

Baking powder (corn starch, sodium bicarbonate, monocalcium phosphate),
flour, salt, butter, Sugar, milk, pastry cutter, knife,
spoon, oven, parchment paper,
kitchen scale, Bowls, measuring utensils, pan.

procedure

Mix 1 and ¼ cup flour, 1tbs sugar and ½ salt. Divide into 3 bowls. Weigh each bowl to make sure they have an equal amount of the mixture. In one bowl, there is no baking powder. In another bowl, 1 tsp baking powder (the correct amount). In the last bowl, 2 tsp baking powder. Use the pastry cutter to cut 2 tbs of butter into each bowl. Add 1/6 cup milk to each bowl. Knead each bowl 5 times. Shape biscuits and place them in a pan. Bake at 425°F for 8 minutes. Keep track of which batch is which.

Variable: the amount of baking powder

Baking powder is important in biscuits because it makes the biscuits rise. Surprisingly, adding twice as much baking powder did not make a significant difference in the height of the biscuit. A recipe can only benefit from so much baking powder. As seen in my data, the biscuits with twice the amount of baking powder as called for do taste better but rose only a little bit more than the biscuits with the regular amount of baking powder. According to my results, the taste of the biscuits did not vary much with changing the baking powder. The biscuit with the regular amount of baking powder and the one with no baking powder had the same total score in taste. This surprised me because the ones that did not have baking powder did not taste as fluffy as the others. I think the experiment would benefit from having more people taste the biscuits. Here, I had four people taste the biscuits. In conclusion, the amount of baking powder does affect the height and taste of biscuits.

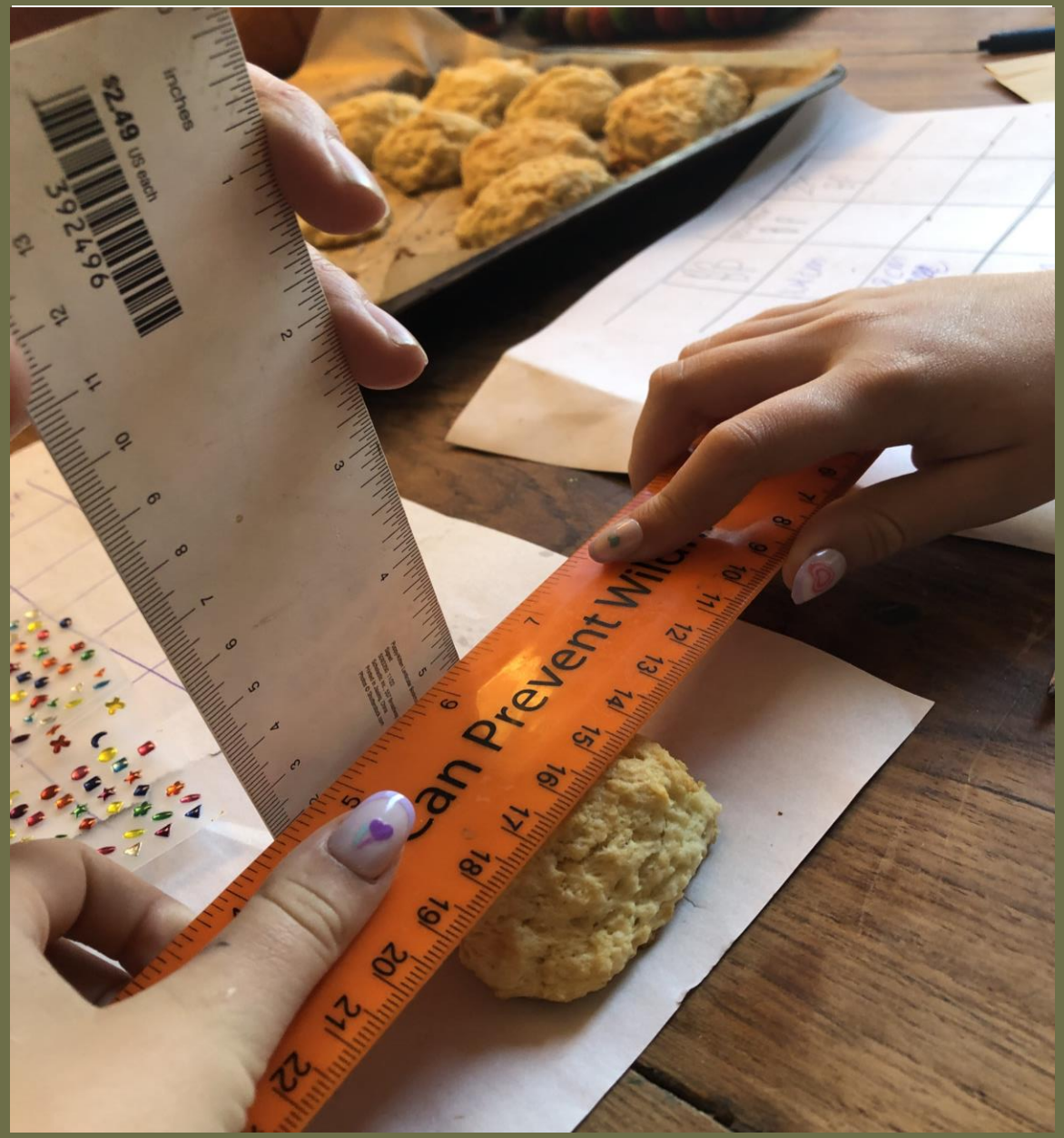
Taste

Scale of 1-10 Gross 1 – 10 Delicious

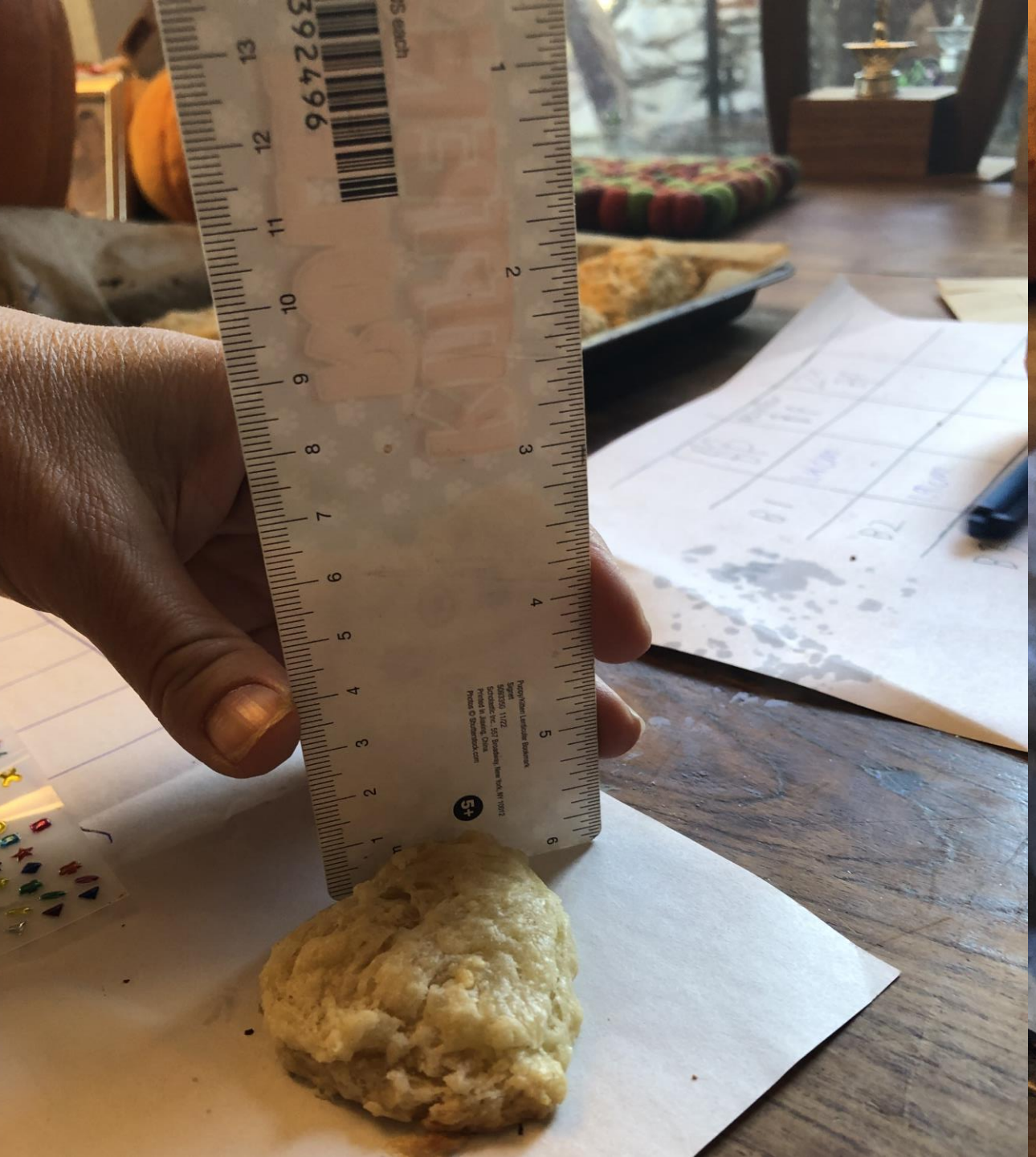
	NO BP	NORMAL BP	2×BP	TASTE TESTER
B1	5	7	9	SOPHIA
B2	3	4	5	RUBY
B3	7	6	7	ANNABELLE
B4	5	3	3	ADA
	Total score: 20	Total score :20	Total score :24	

HEIGHT

	NO BP	NORMAL BP	2× BP
B1	1.4 CM	2.8 CM	2.6 CM
B2	1.8 CM	2.5 CM	3.0 CM
B3	1.4 CM	2.5 CM	2.8 CM
B4	1.2 CM	3.0 CM	2.6 CM


$2.49 US each
392496
inches

2×BP



1×BP
2×BP

u Can Prevent Wildfires!

Sources

1. America's Test Kitchen. What is the difference between baking powder and baking soda?" Accessed on October 21, 2025, https://www.americastestkitchen.com/articles/6262-what-is-the-difference-between-baking-powder-and-baking-soda-ask-paul.
2. Kiddle. "Baking powder facts for kids" Accessed on October 21, 2025,
3. https://kids.kiddle.co/Baking_powder
4. 3. Food Network. "What is baking powder?"
5. Accessed on October 21, 2025,
6. https://www.foodnetwork.com/how-to/packages/food-network-essentials/what-is-baking-powder