



The Cookie Chronicles

Mission to develop *my* perfect
chocolate chip cookie recipe.



Defining My Perfect Cookie

Appearance

Bakery-style: cracked tops, slightly rippled edges, holds some volume (not too thin or puffy), *pools* of chocolate.

Texture

Slightly soft in the center with a *slight* chew all around. Not cakey, crispy, nor fudgy.

Taste

Nutty. A hint of caramel.. Not cloyingly sweet. Not so much chocolate that I can't taste the cookie alone.

Accessibility

The ingredients have to be within most people's reach. The quantities must be reasonable enough for both measurement systems (US and metric), and for scalability (looking at you, eggs!). No messing around with high- versus low-protein flours.

Cookie Science Fundamentals



Fat

The type, quantity, and preparation of the fat impacts the taste, crisp- versus cakey-ness, and spread. Butter contains some water (less among European-styles), while lard and oils are 100% fat. More liquid fats yield a thinner, crispier cookie, while creamed fats yield a taller, cakier cookie. Browning butter removes water from the fat and adds a toffee flavor.



Sugar

The type and quantity of sugar(s) used impacts the taste, chewiness, color, and spread. Brown sugar contains molasses, so that contributes to a more caramel tasting, chewy, darker colored cookie.

Cookie Science Fundamentals



Temperature

The temperature of the ingredients when you make the dough impacts how they are creamed together, and ultimately, the final product's texture. Temperature is also important to specify for recipe reproducibility.

Baking cookies right after you make the dough will increase the spread. Chilling the dough will allow the fat to spread more slowly for a taller, crackled appearance.



Age

Aging (sitting in the refrigerator) for a few days also helps dehydrate the dough, which alters texture and appearance, and deepens flavor.



Leavening

In addition to providing volume, leaveners affect color. Baking soda is a basic (alkaline) powder. Baking powder contains baking soda (alkaline), cream of tartar (an acid), and sometimes a neutral starch.

Though most recipes call for both, some may call for only one.

Using baking soda alone will produce a more alkaline dough, which encourages more browning (Maillard reaction).



The Experiment:

Phase I: Make a half batch of 3 recipes and evaluate each (types and quantities of ingredients). Comment on the resulting cookies, identify what I like about each, and speculate about contributing factors.

David Leite, Tara O'Brady, Claire Saffitz



I had to make Claire's recipe twice because I mistakenly added too much dark brown sugar (80% of total sugar) in the first batch. Her original recipe calls for 50% of each, granulated and dark brown.

Differences: Ingredients and Methods

David Leite

A somewhat inconvenient amount of room temperature butter (2.5 sticks) is creamed together. Equal amounts (by weight) of flour and bread flour. The most amount of chocolate! 55 g dough balls.

Tara O'Brady

2 sticks of butter are melted on the lowest heat possible to minimize water evaporation. Did not specify the size of the eggs. 75 g dough balls.

Claire Saffitz

2 sticks of butter are browned and the water lost is replaced with heavy cream. Instead of light brown sugar and both leaveners, Claire calls for dark brown, baking soda (only), more vanilla (3x by weight), and cold eggs. She also specifies 2 types of chocolate (milk and bittersweet) and adding chocolate bits on top of the dough before baking for that bakery-style look. Longest baking time. 60 g dough balls.

Similarities: Ingredients and Methods

Salt

Kosher. Most bakers use this, and since salt can vary drastically in size across brands and types, it's always important to match the type specified in the recipe.

Butter

Unsalted.

Chocolate

Chopped bars, disks, and fèves are popular for a reason: while chips are in the recipe's name, they contain stabilizers that help them retain their chip-like shape after baking. The other types, however, flow freely, form rich puddles, and seep into grooves like rivers.

Age

Everyone recommends aging the dough for at least 24 hours. Claire explains further that she ages the dough balls before freezing them to dry the dough slightly and achieve a better texture.

Notes about my methods:

David Leite

I did not use 50% all-purpose (AP) flour and 50% bread flour per the recommendation of some NYT comments.

Tara O'Brady

I baked the cookies at 360 F per her instructions for my first batch but did not notice any differences and baked subsequent batches at 350 F.

Claire Saffitz

By mistake, instead of using cold eggs per her recipe, I used room temperature eggs.

Notes about my methods:

Measurements

To minimize waste and overproduction, I made half batches and weighed my ingredients using a kitchen scale.

Eggs & Butter

Large eggs were always brought to room temperature.

Kerry Gold unsalted.

Brown Sugar

Light brown sugar recipe:

215 g (1 cup) granulated sugar

10.5 g (1 tbsp) of molasses

Dark brown sugar recipe:

215 g (1 cup) granulated sugar

21 g (2 tbsps) of molasses

Notes about my methods:

Chocolate (Amount)

With my limited budget, I eyeballed the amount of chocolate I used, which was about 100-140 g (for a ½ batch).

References for a ½ batch:

David calls for 340 g,
Tara 170 g, and Claire 142 g

Chocolate (Type)

When I felt like it and had extra chocolate on hand, I chose my own adventure and used different types of dark (85%) chocolate mixed with the occasional, random "candy bar" chocolates.

Baking Temp and Time

350 F for all recipes (about 55g of dough).

Cookies were baked until they looked done.

Visual Comparison

These bars show the quantity of each ingredient as a percent of the total weight of the dough in grams.

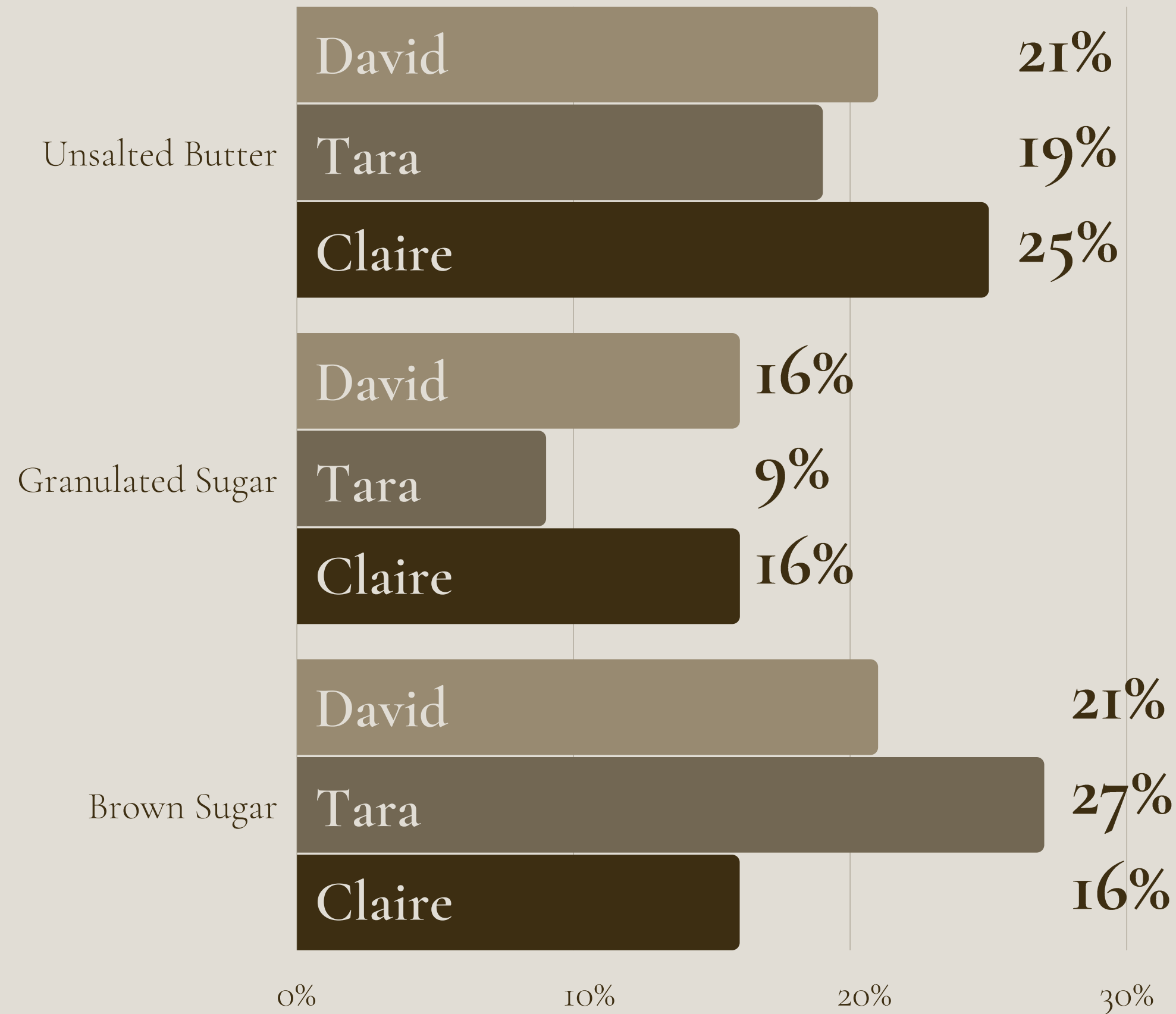
Total dough weight for half a batch was calculated as the sum of hefty ingredients (flour, butter, sugars, egg):

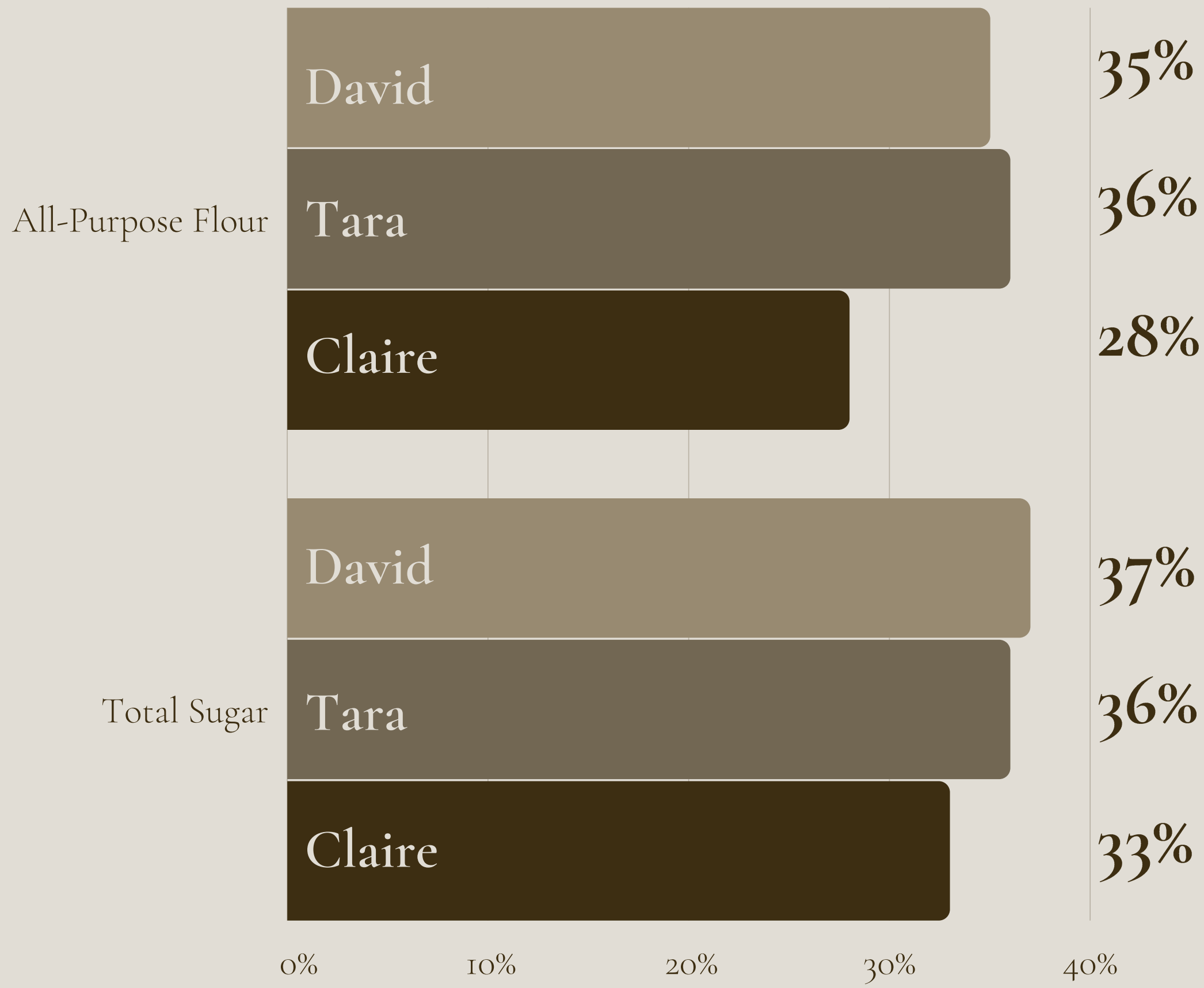
David: 692 g

Tara: 584 g

Claire: 460 g

*The displayed percentages of granulated and brown sugar in Claire's recipe reflect the original recipe and not the version with my mistake.



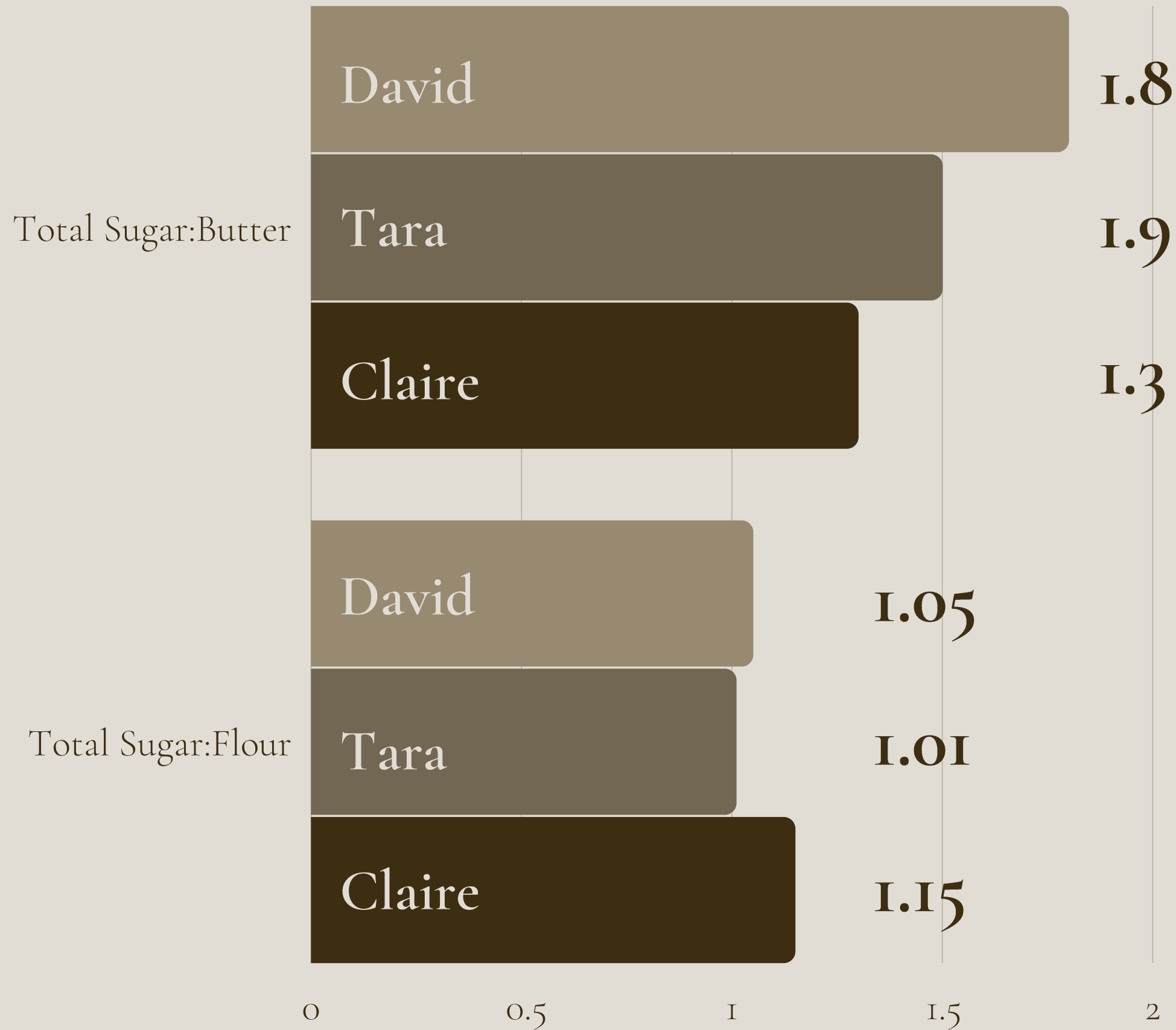


Visual Comparison

These bars show the quantity of each ingredient as a percent of the total weight of the dough in grams.

Visual Comparison

Ratio of the total amount of sugar (g) to butter (g) and to all-purpose flour (g).





Taste Test: David

Appearance: Second best. Some "bakery style" cracks on top.

Flavor: The dough is more one-dimensional (just "sweet") and takes (chewing) time to deepen.

Texture: Best texture. Mostly crunchy (around the edges, top, and bottom) but not crispy. Center remains soft.



Taste Test: Tara

Appearance: Best. It's taller and spreads the least, but not cakey. Has "bakery style" cracks on top.

Flavor: Slightly more pronounced buttery flavor, some caramel notes.

Texture: Least favorite. It's chewy, especially around the edges and the bottom, which is thicker. Slightly gooey center and crisp on the top and bottom.



Taste Test: Claire

Appearance: Surface is flatter. It spreads but not too much. The edges are slightly rippled. Darker brown in color from dark brown sugar and the lack of baking powder.

Flavor: The brown butter aftertaste is subtle. Saltier. A potential confounder is my addition of milk and dark chocolate. Milk may have added a toasty-malty flavor.

Texture: Very tender crumb throughout with a barely crisp bottom.



Taste Test: Claire

Appearance: Even more dark brown than Claire's original recipe due to my mistake of adding extra brown sugar. A friend thought this was a double chocolate cookie and liked this the best.

Flavor: Caramely, almost burnt (but not yet) sweetness. Most immediate and strong in flavor. The favorite of my aforementioned friend who tried all 3!

Texture: Slightly cakey in center. Lacey, crisp outermost edge but edges are softest out of the 3.

Takeaways

Field notes from my lengthy excel sheet:

Creaming the butter yields my favorite texture, but I love the multi-dimensional flavor profile that browning the butter gives. Consider browning the butter, adding back the lost water content, and putting the butter in the fridge to set for a creaming method.

No need for an extra egg yolk or cornstarch for fudginess, since I like the diverse texture of the crunch + softness.

Approximately 55g of dough per cookie gives great texture and appearance.



Consider reducing granulated sugar a touch for reduced sweetness and spread. Up the vanilla to 3g like Claire's and less chocolate is fine so you can taste more of the cookie, but make sure to add chocolate on top for the bakery-style look. Consider blooming instant espresso in the hot browned butter.

(Left to right)
David, Tara



Definitely refrigerate for 2 days before placing into fridge (helps to dry out/age the dough for flavor and texture).

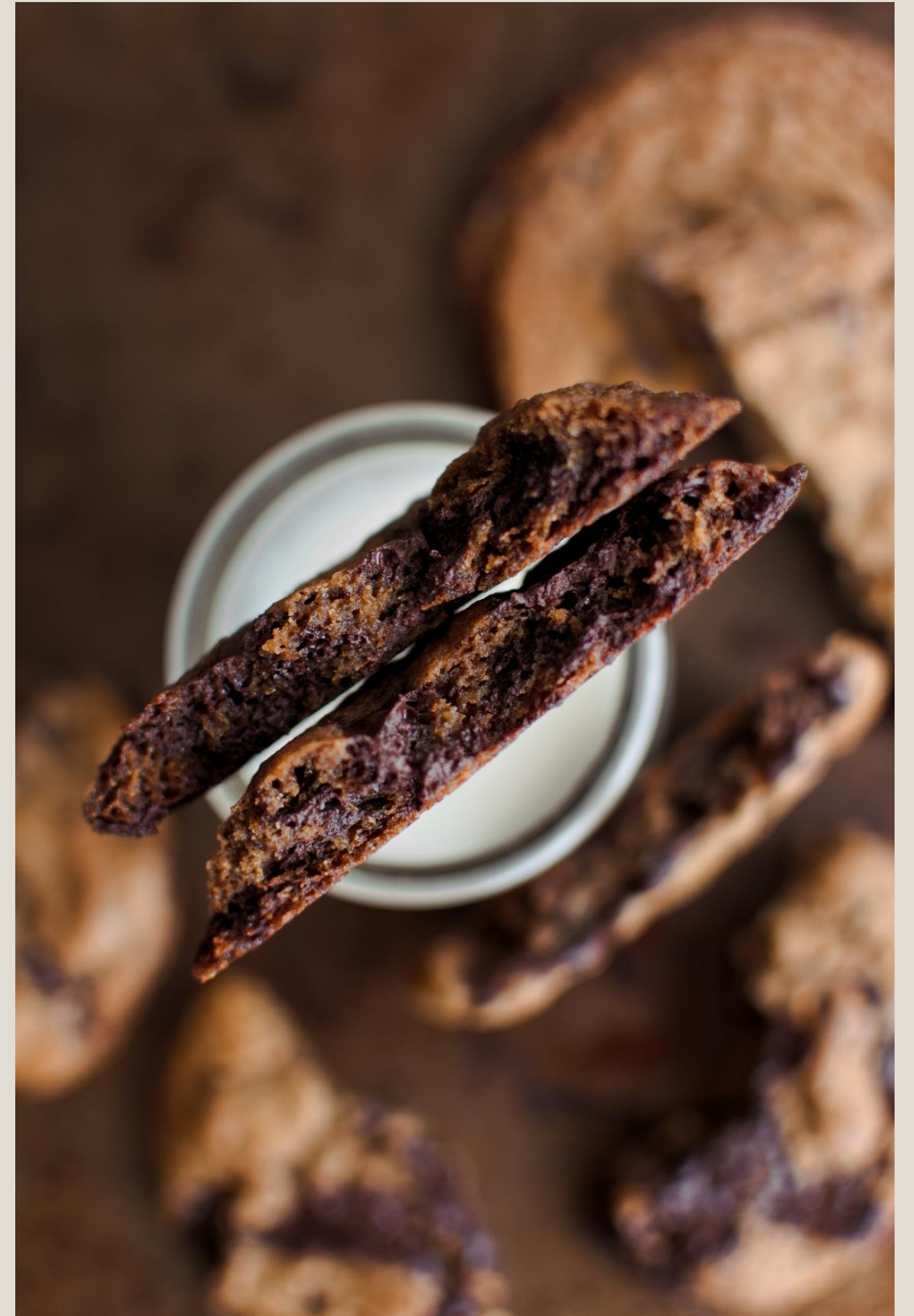
(Left to right)
David, Tara



And after many excuses
to empty my freezer and
give cookies to friends...

*For baking from frozen, bake
for 10 minutes, bang the pan,
rotate sheet and bake for
another 5-8 minutes (large
range given varying dough
ball sizes).*

(Left to right)
Claire, Claire (80%)



Developing
My Perfect
Cookie
Recipe

Phase II





Batch #1

*Great appearance. Still very sweet - consider halving granulated sugar and keeping brown sugar amount the same for a darker color, less sweetness, more molasses-y taste (about 66% of total sugar). (How would that affect texture?) Can taste some of the browned butter notes, but the flavor is still slightly flat. Texture is perfect - slightly softer in the middle but bottom is firm and has a nice chew. Edges are crisp (*chef's kiss*).*



Recipe:

Browned the butter but let it solidify in the fridge. Replaced the water evaporated with water, not milk. Took the butter out and brought it up to room temperature alongside the egg (1 hour) before creaming it.

	Experiment #1	%	
AP flour	208	35%	same as Tara's and Claire's, close enough to David's
baking soda (g)	3		same as Tara's and Claire's, close enough to David's
baking powder (g)	3		3g (6g for full on David's website)
NaCl (g)	3		same as 1 tsp, used Claire's measurement
			<i>Prep note: leaveners and salt added to the creamed butter/sugar/eggs for even distribution and minimal mixing of flour</i>
water (g)	15		Easiest measurement/same as Tara's and Claire's, 18g evaporated rounded down, added to butter right after it was browned; about 1.5 tablespoons but my tablespoons aren't accurate
butter, unsalted granulated	113	19%	95g after browning, fridge for 1 day or until solid, room temp before creaming
light brown	107.12	18%	
egg (room temperature)	53		
chocolate	100		
vanilla	3		
total amount of sugar	214.24	36%	
total sugar:beurre	1.895929204		
total sugar:flour	1.03		(predetermined to be between David's and Tara's, used to multiply by the amount of flour to determine the amount of sugar)
Total weight (not counti	603.24		
	55		
	350		
	12 minutes		

Batch #1





Batch #2

The amount of granulated sugar was half of what #1 called for. It wasn't as crackly in appearance. The texture was a touch softer and cakier. The molasses and browned butter flavors were more pronounced. Try bumping up sugar by 25% (so 75% of the original amount)?

When testing between parchment paper and a new silicone baking mat, I realized silicone doesn't absorb oil, so the silicone-baked cookies were very oily. Never again! Will bake cookies exclusively on parchment moving forward.



Recipe:

It was a double batch of recipe #1 with half of the granulated sugar. After browning the butter, I ended up needing a bit more water to get back to 226g (it wasn't exactly double the amount of water used in recipe #1).

	Experiment #2	%	Experiment #2 notes:
AP flour	416	38%	
baking soda (g)	6		
baking powder (g)	6		
NaCl (g)	6		
water (g)	35		(not exactly double the halved recipe)
butter, unsalted	226	20%	190 after browning
granulated	107	10%	
light brown	214	19%	
egg (room temperature)	106		
chocolate	200		
vanilla	6		
total amount of sugar	321	29%	
total sugar:beurre	1.420353982		
total sugar:flour	0.771634615		
Total weight (not counting	1104		



Batch #3

I used 75% of the amount of granulated sugar as I did in #1. The cookie was still cakier than chewy with a fudgy center, but I liked that the dough wasn't that sweet.

Nonetheless, the texture just wasn't satisfactory. Next step... repeat recipe or re-evaluate?



Recipe:

It was a single batch, just like recipe #1 with 75% of the granulated sugar. After browning the butter, I ended up needing a bit more water to get back to 113g! Instead of 15g, I added 25g, but I don't think that small difference in water content would noticeably affect the texture.

	Experiment #3	%	Experiment #3 notes:
AP flour	208	35%	(1.5 cups)
baking soda (g)	3		(3/4 tsp)
baking powder (g)	3		(3/4 tsp)
NaCl (g)	3		(1/2 -3/4 tsp)
water (g)	25		somehow needed more water to get to 113g
butter, unsalted granulated	113	19%	
light brown	80.25	14%	
egg (room temperature)	107	18%	
chocolate	53		
vanilla	100		
	3		
total amount of sugar	187.25	32%	
total sugar:beurre	1.657079646		
total sugar:flour	0.900240385		
Total weight (flour, water, butter, sugars, eggs only)	586.25		

Trial #4

(Batch #3 repeated)

I called this a success! Making sure to cream the butter properly until it felt fluffy and aerated was crucial.

I liked the taste; I liked the texture; I liked the look of the crackly top.



I didn't change anything about the recipe, but I *was* more careful about my method. While it's usually more helpful to go by look and feel, sometimes time can be a helpful benchmark: creaming the butter and sugars for about 3 minutes was the key difference this time around.

And look at the difference! Batch #3 (left) was taller, slightly cakier in the center, and crisp around the edges. Batch #4 (right) was flatter, a mix between chewy and fudgy in the middle, and chewy with a slight crisp around the edges.





The Recipe

Ingredients

Makes about 10-15 medium-sized cookies

Wet

113g European butter, unsalted (1/2 cup)

15g water

80g granulated sugar

107g light brown sugar*

1 large egg, at room temperature

3g vanilla extract

Dry

208g all-purpose flour (1 1/2 cups**)

1/2 tsp baking soda (about 3g)

3/4 tsp baking powder (about 3g)

3/4 tsp Diamond Crystal kosher salt (about 2.5g)

100g chocolate bar, chopped

(optional: flakey Maldon sea salt or fleur de sel to garnish)

*Recipe for light brown sugar: 215g (1 cup) granulated sugar mixed with 1 tablespoon of molasses

**How I measure flour: Stir the flour. Scoop it into a measuring cup. Shake to level.

Instructions

Do ahead: Brown the butter in a small pot or saucepan over medium heat (see [Claire Saffitz's tutorial at 3:00](#)). Transfer the browned butter and all the solids to a medium sized mixing bowl (Scrape the pot clean! Expect about 95-100g of browned butter left). Add the 15g of water. Once it's at room temperature, put it in the refrigerator for at least 2-3 hours to harden (I prefer the overnight method for convenience).

Make the dough: Bring the butter and egg to room temperature. This takes about 30-60 minutes. You don't want the butter to be so soft that it smushes like you're running a spoon through a bowl of oatmeal, but you want it soft enough that it can easily be poked through by your finger.

Add the sugars to the same mixing bowl that the butter is in. With a handheld mixer, cream the butter and both sugars for 3 minutes. It should feel light and fluffy and look pale yellow. If you do this by hand with a wooden spoon, it may take longer.



Add the egg and vanilla. Cream for another minute (it's okay if it starts to look like it's splitting - just keep mixing until it comes back together).

Add the baking soda, baking powder, and salt. Mix.

At this point, I scrape the electric beaters clean with a rubber spatula and gently stir in the flour until combined. No need to intentionally undermix but take care not to overmix. Fold in the chopped chocolate. Sometimes, I set 2 tablespoons or so of chocolate aside to top the cookies with before baking.

Age the dough: Seal the bowl of cookie dough with a lid or plastic wrap. Transfer to the fridge and let the dough age for at least 30 minutes, but preferably 2 days.

Magic at 350°F: When you're ready to bake, preheat the oven to 350 Fahrenheit. Use a medium-sized cookie scoop to spoon out approximately 50-55g of dough per cookie (golf-ball size). Bake the cookies on a parchment lined baking sheet for 8 minutes for soft, chewy cookies; 10 minutes for slightly crispy, chewy cookies. The cookies are done when the edges have hardened and the centers have begun to set (it's okay if they still look a little gooey).



When I remove the tray from the oven, I bang the cookie sheet a few times on a cutting board lined with a kitchen towel (to absorb sound; your pets and neighbors will thank you). This will flatten the cookies slightly, push the texture towards chewy, and give the tops a beautifully uneven, crackly appearance. If you can wait, let the cookies cool completely. The cookies will continue to bake from the residual heat on the pan. Allowing the cookies to set will also result in a chewier texture.

If you'd like additional contrast, grab a pinch of Maldon sea salt or fleur de sel, and top each cookie with some flakey, crunchy crystals.

And do share these - they always taste better with good company around!



Instructions for freezing: Freeze the remaining dough balls on a flat baking sheet. Once frozen, transfer to a resealable bag or freezer-safe container. You can bake the cookies from frozen, which I typically do (12 minutes for soft, chewy cookies; 14 minutes for slightly crisper ones.)



Perfection or process?

Dorie Greenspan, whose baking, story, style, and cheer inspire me in all areas of life, has published 28 different chocolate chip cookie recipes across her 14 cookbooks. She's constantly tinkering and completely okay with it. In an interview with Food52, she said, "I can't stop tinkering with it. I love the form of it. I love the idea of it." I imagine I'll continue to embrace the experimentation; it's as enjoyable as the process itself. But for now, I'm very content with this recipe!



You made it
to the end?!

Thank you and
happy baking!

hannahclaudia.blogspot.com