

# The Fluffiest Dinner Rolls

We thought the classic light, tender American dinner roll couldn't get any better. Then we tried a cutting-edge Asian baking technique.

≧ BY ANDREA GEARY ≦

I used to think that the Old Testament adage “There is nothing new under the sun” could be applied to bread baking. Most “new” bread recipes are actually just modern twists on established recipes or resurrections of bygone techniques. So I was intrigued when I read about *tangzhong*, an oddball bread-making technique that originated in Japan and was popularized by pastry chef Yvonne Chen in the early 2000s.

Instead of simply combining the dry and wet ingredients and kneading as you would to make a conventional loaf, you begin by cooking a portion of the flour and liquid to form a pudding-like paste that you then let cool and mix into the dough. Fans of the method claimed not only that it produced bread with a particularly moist, airy, feathery crumb but also that the loaf remained fresh and soft longer than conventional bread.

Curious, I made a popular published Japanese milk bread recipe (a soft, rich sandwich loaf with a snow-white crumb that's a staple in Asian bakeries) that employs the *tangzhong* method and was immediately won over: The dough was soft and silky, and its pillowy crumb was made up of delicate, almost croissant-like sheets. Eating it gave me the kind of satisfaction I get from a really good dinner roll—except that this bread was even fluffier and, as promised, maintained its impressively moist, plush crumb over the next couple of days.

So, what if I applied this Japanese technique to my usual pull-apart dinner roll recipe? If it worked, it could potentially yield the best dinner rolls I'd ever made and give them a perk that most rolls don't have: make-ahead potential.

## Well-Hydrated

In the recipes I found that employ the *tangzhong* method, the paste is about 5 parts liquid to 1 part flour and makes up 15 to 20 percent of the total dough weight. My standard dinner roll recipe yields 25 ounces of dough, so to make about 5 ounces of paste, I whisked together ½ cup of water and 3 tablespoons of bread flour in a saucepan. As I stirred the mixture over medium heat, its consistency went from heavy cream to thick pudding. I set the paste aside to cool while



Besides boasting a particularly moist and feathery crumb, these rolls can be made a day in advance and still taste great.

I added the remaining ingredients to the stand mixer bowl: 2 cups of bread flour, instant yeast, a little sugar and salt, 4 tablespoons of softened butter, an egg, and ¼ cup milk. Then I added the cooled paste and started mixing. But after 3 minutes, I knew something was wrong: The dough, which is usually slightly sticky and workable was dry and tight.

I knew this wasn't typical for a *tangzhong* dough, because the Japanese milk loaf dough I'd made had

been soft and smooth. It wasn't until I compared the hydrations of the two doughs that I discovered the discrepancy: My standard dough had a hydration of 60 percent (meaning there were 6 parts liquid to every 10 parts flour), while the hydration of the Japanese milk bread was 80 percent, which I later learned was typical for a dough using the *tangzhong* method. Ordinarily, that much liquid would make a dough slack, sticky, and hard to shape, but not so with my milk bread.

I made another batch of rolls with a hot-water paste, but this time I added extra milk (½ cup total) to the dough to bring the hydration to 80 percent. Sure enough, the dough was soft and silky, not sticky, and held its shape nicely after kneading.

So why wasn't it a sticky mess? In a standard dough, where you mix cold water and flour, most of the water is not absorbed, so the stickiness you feel is so-called free water. But as I learned making Mandarin pancakes for Mu Shu Pork (March/April 2015), flour can absorb twice as much hot water as cold water. Heating the water for the paste allows it to be fully absorbed by the flour; in essence, a portion of what would be free water in a standard dough gets locked away.

Thus, when the flour paste is mixed with the rest of the ingredients, the dough is smooth, not sticky.

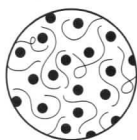
From there, I knocked the air out of the doubled dough to eliminate large air bubbles and encourage a fine crumb, portioned it into 12 pieces, rolled each into a taut ball, and arranged the rolls in a greased cake pan to rise. Baked at 375 degrees until they were deep golden brown, these rolls were moist and flavorful—but they were a bit squat and the crumb was coarse.

## What Makes These Rolls Unique?

An Asian bread-making technique called *tangzhong* produces exceptionally moist rolls by incorporating a good amount of water. Ten minutes of kneading creates the structure needed to support the extra liquid, and a special shaping method delivers delicate, sheet-like layers.



MORE WATER



MORE STRUCTURE



LAYERED SHAPING

## Building Strength

A close look at some *tangzhong* recipes revealed my mistake: I had added more moisture to my dough without building any additional structure to support the greater expansion of steam produced by the extra water. So I made a few changes. First, I added an autolyse—a brief resting period between mixing and kneading the dough that alters the gluten-forming proteins so they can link up more effectively. Withholding sugar and

salt until after the autolyse makes this little power nap even more effective, since those ingredients would otherwise slow the alteration of the proteins. Second, I waited until the second half of the kneading period—when the gluten was well established—to add the butter, since fat makes the gluten strands slippery and unable to “grab” each other to form a network. I also streamlined my method by microwaving the flour paste; roughly 60 seconds on high did the trick. And rather than wait for the hot paste to cool (so it wouldn’t kill the yeast on contact), I added it to cold milk and whisked them together until the mixture was merely warm.

With those changes, my rolls were lighter and boasted a finer crumb, so I was definitely on the right track. But those gossamer-thin layers were still missing, and I wondered if altering my shaping method might help.

When dough is kneaded, the flour proteins link up in a fairly random way. Rounding each portion of dough into a tight ball, as you typically would when shaping dinner rolls, organizes the proteins on the exterior into a kind of membrane (bakers call this a “gluten cloak”) but does not affect the proteins on the interior, which remain random. The Japanese milk bread’s shaping method was elaborate, and now I suspected that it was the key to the bread’s delicate vertical layers. To shape that loaf, I had divided the dough into four pieces, rolled each one into a rectangle, and folded each rectangle into thirds like a business letter; then I flattened each piece of dough out again and rolled it up again like a jelly roll before nestling it into the loaf pan with the others.

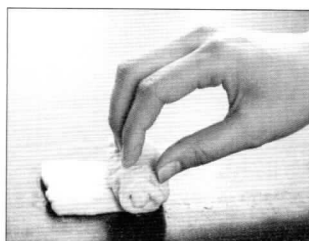
Because I was shaping 12 dinner rolls instead of four larger dough pieces, I tried a simplified version, flattening each piece into a long, narrow rectangle before rolling it up and placing it in the pan. When

## TECHNIQUE | CREATING A LAYERED LOOK

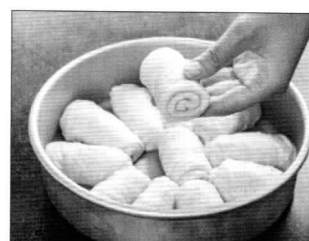
Rolling the dough into balls, as most recipes instruct, causes the gluten to organize randomly and the crumb to be sponge-like. Stretching and rolling the dough into tight spirals organizes the gluten into sheets, and the rolls develop delicate, distinct layers.



**FORM** Gently stretch and press dough into 8 by 2-inch strip.



**ROLL** Starting at 1 end, roll strip into snug cylinder.



**ARRANGE** Place cylinders seam side down in prepared pan.

the rolls had doubled, they looked especially smooth and plump, thanks to the strong gluten development. I baked them to a deep golden brown, removed them from the pan, and brushed them with ½ tablespoon of melted butter.

When I pulled one roll from the round, it separated from the others cleanly, and I delightedly peeled away layer after delicate layer. The combined effect of the added liquid in the flour paste, the well-developed gluten, and the unusual shaping had given me the ideal dinner roll: moist, tender, and particularly fluffy. The most convincing part of all: The rolls were great the next day when I refreshed them in the oven, a real bonus when making them for a holiday dinner.

### FLUFFY DINNER ROLLS

MAKES 12 ROLLS

We strongly recommend weighing the flour for the dough. The slight tackiness of the dough aids in flattening and stretching it in step 5, so do not dust your counter with flour. This recipe requires letting the dough rest for at least 2 hours before baking. The rolls can be made a day ahead. To refresh them before serving, wrap them in aluminum foil and heat them in a 350-degree oven for 15 minutes.

#### Flour Paste

- ½ cup water
- 3 tablespoons bread flour

#### Dough

- ½ cup cold milk
- 1 large egg
- 2 cups (11 ounces) bread flour
- 1½ teaspoons instant or rapid-rise yeast
- 2 tablespoons sugar
- 1 teaspoon salt
- 4 tablespoons unsalted butter, softened, plus ½ tablespoon, melted

**1. FOR THE FLOUR PASTE:** Whisk water and flour together in small bowl until no lumps remain. Microwave, whisking every 20 seconds, until mixture thickens to stiff, smooth, pudding-like consistency

that forms mound when dropped from end of whisk into bowl, 40 to 80 seconds.

**2. FOR THE DOUGH:** In bowl of stand mixer whisk flour paste and milk together until smooth. Add egg and whisk until incorporated. Add flour and yeast. Fit stand mixer with dough hook and mix on low speed until all flour is moistened, 1 to 2 minutes. Let stand for 15 minutes.

**3.** Add sugar and salt and mix on medium-low speed for 5 minutes. With mixer running, add softened butter, 1 tablespoon at a time. Continue to mix on medium-low speed 5 minutes longer, scraping down dough hook and sides of bowl occasionally (dough will stick to bottom of bowl).

**4.** Transfer dough to very lightly floured counter. Knead briefly to form ball and transfer, seam side down, to lightly greased bowl; lightly coat surface of dough with vegetable oil spray and cover with plastic wrap. Let rise until doubled in volume, about 1 hour.

**5.** Grease 9-inch round cake pan and set aside. Transfer dough to counter. Press dough gently but firmly to expel all air. Pat and stretch dough to form 8 by 9-inch rectangle with short side facing you. Cut dough lengthwise into 4 equal strips and cut each strip crosswise into 3 equal pieces. Working with 1 piece at a time, stretch and press dough gently to form 8 by 2-inch strip. Starting on short side, roll dough to form snug cylinder and arrange shaped rolls seam side down in prepared pan, placing 10 rolls around edge of pan, pointing inward, and remaining 2 rolls in center. Cover with plastic and let rise until doubled, 45 minutes to 1 hour.

**6.** When rolls are nearly doubled, adjust oven rack to lowest position and heat oven to 375 degrees. Bake rolls until deep golden brown, 25 to 30 minutes. Let rolls cool in pan on wire rack for 3 minutes; invert rolls onto rack, then reinvert. Brush tops and sides of rolls with melted butter. Let rolls cool for at least 20 minutes before serving.

#### ► Tangzhong in Action

Video available free for 4 months at [CookIllustrated.com/feb16](http://CookIllustrated.com/feb16)



### SCIENCE What Is This Thing Called Tangzhong?

The *tangzhong* method calls for

briefly cooking a portion of the flour and water to make a paste, which is then combined with the rest of the ingredients. By using hot water, we can actually add more liquid to the dough because flour can absorb twice as

much hot water as cold water. The superhydrated dough yields rolls that are not just moist but also fluffy because the water converts to steam, which acts as a leavening agent, creating rise. The extra water also increases gluten development, giving the bread the structure it needs to contain the steam rather than letting it escape.



#### HOT WATER PASTE

The paste should be stiff and smooth.