LAMINATION

All laminated doughs follow a similar method, so it’s helpful to get familiar with the vocabulary and the basic concepts before getting started. Put simply, **Laminated Dough**, refers to any dough, yeasted or not, with alternating layers of butter and dough, created through a process of repeatedly rolling and folding the dough.

First, we’ll start with some vocabulary. I’ve used professional terms here.

**Détremppe** – the “dough” portion of your laminated dough. It usually contains little to no butter and should be mixed ahead of time for the gluten to relax before starting lamination.

**Beurrage** – the fat portion of your laminated dough, usually butter ("beurre" in French). The beurrage should be prepared just before start lamination so that it will be the right texture and temperature.

**Paton** – refers to the entire piece of dough, when the détremppe and the beurrage have been married.

**Turn** – refers to the folds themselves. There are two main types of turns, a “single turn” in which the dough is folded in thirds (and which we will be using exclusively) and a “book turn” in which the dough is folded in fourths.

There are **three** main laminated doughs:

1) **Puff Pastry** has no yeast and rises in the oven through mechanical leavening alone (i.e. steam). Puff pastry, or pâte feuilletée in French, gets six turns, usually done in pairs, but because there is no fermentation happening during the lamination process, it is the easiest dough to make.

2) **Croissant dough** includes yeast in the détremppe and rises both before baking through organic leavening (fermentation from the yeast) and in the oven through mechanical leavening. Croissant dough gets only three turns, but because the yeast starts to ferment during the lamination process, causing the gluten to develop, turns can only be done one at a time.

3) **Danish dough** functions essentially like a modified croissant dough. The détremppe contains whole eggs and/or yolks and traditionally, cardamom. This dough also contains yeast, so both the lamination and baking process are very similar to croissant dough. (We won’t be making Danish dough together, but after making puff pastry and croissant dough, you should be ready to follow any traditional Danish recipe.)
**Master Croissant Dough / Pâte à Croissant**

*Makes approximately 20 pastries*

**DÉTREMPE**
- 890 grams unbleached all-purpose flour (I like King Arthur or Bob’s Red Mill)
- 65 grams granulated sugar
- 11 grams (1 tablespoon + 1 teaspoon) kosher salt
- 14 grams (1 tablespoon + 2 teaspoons) instant dry yeast (not rapid rise)
- 60 grams unsalted butter, cut into small pieces
- 2 cups cold whole milk
- 1/4 cup water (as necessary)

1. In a medium-large bowl, combine the flour, sugar, salt and yeast. Add the butter and cut in (with a pastry blender, butter knives, or by hand) until the butter is in lentil-sized pieces.

2. Add the milk by pouring around the top of the flour mixture and mix with a wooden spoon or sturdy spatula to make a stiff but pliable dough. If the dough has any dry spots, add small amounts of the water as necessary.

3. Turn the dough out onto a flat surface and knead for about 60 seconds, or until the dough coheres well, and starts to feel stiff. Press the dough into a flat, even approximately 10” square. Wrap tightly with plastic wrap and refrigerate overnight.

**BEURRAGE**
- 450 grams (1 lb.) unsalted butter, *taken out of the fridge 30 minutes to an hour before starting lamination*
- All-purpose flour, as needed

1. Check the consistency of the butter: it should still feel cool but just starting to soften. If using a one-pound print of butter, cut in half down the length of the block, or simply unwrap the sticks.

2. Lay a large piece of plastic wrap on a flat counter surface and sprinkle approximately 2 tablespoons of flour on the middle of the plastic. Arrange the two halves or the sticks of butter to form a square-ish shape. Make sure that the pieces of butter are touching. Dust the top of the butter with an additional sprinkling of flour. Wrap the butter loosely with the plastic, creating a square shape with the plastic (even if the butter is more rectangular) and leaving about 1” of space around the perimeter so that the butter can expand.

3. Using a rolling pin, pound the butter into a flat, even, approximately 8” square. At this stage, the butter should be pliable but still firm. If the butter seems too soft, place in the fridge until it firms up.
LOCK-IN
At this stage, the détrempe and beurrage are put together. There are several methods for doing this, but we’ll use the “envelope” method in which the corners of the détrempe are rolled out and folded over the beurrage, sealing the butter neatly inside the dough. As you are working, be sure to brush off any excess flour so that the dough will adhere to itself.

The lock-in should look like this:

1. 

2. 

3. 

4. 

CROSS SECTION

After you have completed the lock-in, flip the dough over so that the flaps of the envelope are on the underside; this helps them to adhere. After the dough rests for 10 minutes, flip the dough over so that the flaps of the envelope are on top and proceed with the first turn.
FIRST TURN
This is the first of three turns or folds that will create the thin and numerous layers of dough and butter essential to croissants. Between each turn, the dough must rest in the refrigerator for 40 minutes to an hour for the gluten to relax and for the dough and butter to chill. When rolling the dough, work slowly at first and keep your dough as even as possible.

Roll the dough out to three times its original length and fold in thirds. Wrap tightly in plastic and rest in the fridge for 40 minutes to an hour, or until the dough and butter feel firm but pliable.

The first turn should look like this:

SECOND TURN
The second turn is exactly like the first except that the dough will be rolled in the opposite direction from first turn so that the gluten gets stretched equally in all directions. If the dough seems tight and particularly difficult to roll, it’s likely that you’re rolling in the wrong direction. Also: it’s not unusual for the dough to be narrower and longer on the second turn than on the first.

The second turn should look like this:

Set the dough in front of you with edges of the folds perpendicular to your rolling pin and the outside fold on top.

Again, roll the dough out to three times its original length and fold in thirds. Wrap tightly in plastic and rest in the fridge for 40 minutes to an hour, or until the dough and butter feel firm but pliable.
THIRD TURN
The third turn is the same as the previous turns, however, when croissant dough is made by hand, occasionally, the third turn must be done in two stages. The previous rolling and folding causes the gluten to develop, resulting in a dough that can be tight and hard to roll out. If that happens, simply roll the dough as long as it will comfortably go, then wrap and chill the dough for 20 to 30 minutes and proceed with the third turn. When the third turn is complete, wrap the dough well, then rest and chill for at least two hours, or overnight.

SHEET OUT
This is the process of rolling the completed dough out into a sheet of dough that can be used to form one or several kinds of pastries: regular croissant, ham and cheese croissant, pain au chocolat, or escargots. Laminated dough is unique in that cannot be patched or reattached. (I find that it helps to imagine the dough as a piece of fabric from which you will cut out the pieces.) It’s important to cut the shapes as efficiently as possible and it’s important to know which pastries you want to make, so you know what dimensions to roll the dough to. To see dimensions, see the shaping guide on the next page.

1. Using plenty of flour on top and bottom of the dough, roll evenly lengthwise and width-wise, maintaining a rectangular shape. Note: Getting the dough to roll out to the proper size may take a few tries. As always, make sure to rest and chill the dough if the butter starts to melt or the dough breaks. If this happens, simply roll the dough to the largest size comfortable, then chill for 20 minutes and continue to roll.

2. After the correct size is achieved, the dough should be chilled one last time, for 45 min to 1 hour, before being cut and formed into pastries.

HOLDING
Shaped croissants can be proofed and baked immediately after shaping, but because they are usually enjoyed as morning pastries, you’ll usually want to make the dough and shape the pastries ahead of time, then refrigerate or freeze them to bake later.

- If you are going to bake your croissants the next day, refrigerate them until the next morning, then proof and bake.
- If you are going to bake your croissants within two weeks, wrap and freeze them. The night before you want to bake them, transfer the croissants to the fridge; the next morning, proof and bake.

PROOF AND BAKE
1. Space croissants out on a sheet pan, leaving ample space between and fitting no more than six pastries on a standard size sheet pan.

2. Let rise in a warm place until the croissants are doubled in bulk and the layers start to push apart. Preheat oven to 400 degrees F.

3. Brush the croissants with egg wash, making sure to only wash the tops and not the layers on the side (the egg wash will make the layers stick together). Repeat the egg wash one more time. Bake immediately for 15-20 minutes, rotating once, until croissants are dark golden brown. Let cool slightly before eating.
SHAPING GUIDE

For REGULAR OR HAM & CHEESE:

Whole Piece
14” (W) x 24” (L)

Half Piece
14” (W) x 12” (L)

For PAIN AU CHOCOLAT:

Whole piece
12” (W) x 28” (L)

Half Piece
12” (W) x 14” (L)
PROOFING GUIDE

In a professional bakery, croissants rise and are prepared for baking in a temperature and humidity-controlled piece of equipment called a “proofer.” While croissants will proof at room temperature, it’s usually preferable to apply some heat to expedite the process. At home, croissants can be proofed in several ways, depending on what sort of equipment you have and how many croissants you’re planning to bake. I’ve outlined my favorite methods here, but feel free to get creative, improvise and find a method that works for you.

1) TWO OVENS
   If you have two ovens, the easiest method is to preheat one oven to 400 F and to set the other oven to a “warm” or “bread proofing” setting. (Be careful that the warm setting isn’t too warm and turn the proofing oven off as necessary.) With this method, you can proof the croissants completely in your “proofer” and cycle through as many trays as needed.

2) ONE OVEN – ONE TRAY
   If you have one oven and are only planning to bake one tray of croissants, you can start the proofing process in a warm oven and remove them in time to completely preheat. Turn the oven to bread proof or the warm setting; proof the croissants for 15-20 minutes, or until they start to expand. Take the croissants out, preheat the oven and let the croissants finish proofing completely on the counter.

3) ONE OVEN – MULTIPLE TRAYS
   If you’re planning to bake multiple trays and only have one oven, the best method is to proof the croissants slowly on the counter. This way, you won’t have to worry about space constraints and, as you cycle through the baking, you won’t have to worry that fast-moving croissants are going to over-proof while you’re waiting for others to finish baking. Pull the croissants from the fridge and let proof for at least 2 hours before you start checking for readiness.

4) FROZEN – OVERNIGHT
   Although this seems like the easiest of the methods, it’s not my favorite because it’s difficult to control—however, some swear by it. The night before baking, pull the frozen croissants out and arrange on a sheet pan. Leave at room temperature overnight and bake in the morning. If you’re planning on using this method, I’d recommend doing a “tester” the night before to make sure that it’s not too warm and that the croissants won’t over-proof.