

Pâte Levée Fermentée (croissant dough)

Ingredients (for 6) (see appendix for how to make double)

For the dough:

210g strong white flour

30g sugar

4g salt

4g instant yeast

10g whole egg (alternatively no egg and 25g butter)

50g water

50g milk

15g butter (melted)

For the butter block:

125g unsalted butter

Notes on ingredients:

-**Flour:** you want 12-13% protein flour. The higher the protein content, the more liquid needed. Adjust the amount of water very slightly to get the right consistency (moist but relatively firm and not sticky)

-**Salt:** sea or rock salt is preferable, but not required. If using these make sure they are finely ground, otherwise the dough will have lumps of dry flour in it.

-**Yeast:** instant is preferable over active dry, it is faster acting and doesn't require activation with water.

-**Butter:** for the dough, this should be 'just melted', i.e liquid but not yet separated. Butter enriches the dough and makes it more supple, so increase the butter a touch for a dough which handles easier. This does make the final pastry more chewy and less crispy, so it is a compromise. For the butter block, you want **high fat** percentage butter, ideally 82% or above. I have had good results with supermarket own brand butter so it is possible without the French stuff! (but not necessarily as easy)

-**Water:** Tap water is fine, but mineral water should give better results in hard water areas.

Evening before- preparing the détrempe (dough base) -1h 30 approx (rest time incl.)

- Weigh out dry ingredients individually. Weigh out the wet ingredients in a large bowl, then add the salt and sugar and mix to dissolve. Next add the yeast and stir to combine well, before adding the rest of the dry ingredients.

-Add the dry to the wet, this avoids a large clump of dry flour at the bottom. Save the leftover egg for egg wash!

- Next, mix this together using your hands or a spoon, making sure that you incorporate any flour stuck on the sides of the bowl as you go to avoid clumps.
 - A dough scraper is very handy here! At first it will appear to be very dry, but as the dough forms, knead in the dry ingredients and incorporate everything thoroughly. This should take only a couple of minutes. If you are worried about lumps, then you can slowly incorporate the flour bit by bit. To avoid the butter solidifying into chunks as it meets the cold water and milk, either add it in slightly later with the flour and knead well, or melt until completely liquid and whisk into the wet ingredients.
- When the dough has come together, it will be moist and still a bit rough looking/ lumpy. At this point, cover it well and leave it to rest in the fridge for about 15-30 minutes. This lets the gluten network develop and relax so that you can knead the dough.
- Remove from the fridge, and knead the dough for about 5-6 minutes using the slap and fold method, or stretch and fold. (Stretch and fold is easier with a firmer dough).
 - The dough should now feel much less stiff, and should be a bit elastic. If it isn't the right consistency, now is the time to make any adjustments and/or let it rest for longer. Be gentle when handling the dough, trying not to grip it tightly- you do not want to see the gluten strands tearing. If they are tearing a lot then you may need a combination of a touch more water and/or more rest time. If the dough feels stiff and is remaining lumpy, wet your hands and continue to knead. The dough should relax as you work the moisture in. It is important to get this step right!
- The dough is ready when it forms a smooth consistency without lumps, and you can form it into a ball with a smooth round top (boulage).
 - To do this, fold the sides under the dough, tucking them in and building tension on the top surface. Go around the edges and repeat until you have a round dough ball, keeping the 'top' on top. Then use a similar technique to shape it into more of a baton shape, or a rugby ball.
 - <https://youtu.be/-QrgsQWOPHU?si=Bil2gndEbuy1Vfaf> to see this in action
- At this point, you can either cover it (carefully!) and leave it in the fridge overnight (see below on chilling) or rest in the fridge for about 30 minutes, to then roll it out before chilling overnight.
 - The dough may be easier to roll out at this point than after a night in the fridge but this doesn't affect the final product. If you decide to chill it now, simply follow the next step the day after.
- Use your hands to pat down the dough into a rectangular shape, and then press down repeatedly along its length with the rolling pin until fairly flat. At this point roll into a roughly 20x26cm rectangle. Cover **very** well so the dough does not dry out.
 - When pressing down and rolling out, use a large rolling pin preferably without spinning handles, as it gives you better feedback and more control. (This is essentially because you can use friction to push forwards as well as down, which spinning handles don't allow you to do). To press down the dough, press evenly along the length so that small ridges form, and then press those ridges down. Then flip over the dough, and roll out slightly. Repeat.

- At this point you want to place the dough in the freezer for about 20 minutes- this is to ‘hit pause’ on the fermentation process of the yeast.
 - You don’t want the yeast to be active overnight; this can give the dough a more ‘breadly’ flavour and also creates air pockets which will be detrimental for the lamination.
- After this, place in the fridge to chill overnight.
 - The fridge should be on the cold side, around 4°C. If your fridge is quite full or not that cold, either increase the cooling rate of the fridge or make sure you freeze your dough for about 20-30 minutes the next day before the lamination process. You really want a cold *détrempe* to avoid butter marbling or melting!

Day 2 (croissant day!) - 7 h total, 1h hands-on time

Preparation

- Begin by making the butter sheet, called a *beurrage* in French. It is really important to get the consistency of the butter right, otherwise the lamination will suffer. To do this, cut a sheet of baking paper such that you can fold it into a 13x20 rectangle to cover the butter (there are many youtube tutorials on this!). Again, measurements aren’t exact but you want the butter to be the same width as the dough and half the length of your dough.
- Once you have the baking paper measured out, *lightly* flour the paper and the butter and place the butter in the centre, folding it within the sheet. Once this is done, place in the fridge for about ten minutes to cool and prepare for the first lamination step.
 - Try to use a whole block at once, or if you can’t, place the pieces on **top** rather than next to each other. Having the pieces next to each other causes weaknesses in the butter sheet and cracks often appear, leading to *marbling*. Use the rolling pin to pound it down relatively flat, and then roll it *gently* and *evenly* out to the edges. Make sure you don’t create gaps in the butter or unevenness as this will lead to marbling too. If cracks appear, simply fold the butter on itself and roll out again- and cool for a bit longer if it starts to get warm.

First Lamination step:

You will perform the first fold, called ‘*tour double*’, or double fold. Work quickly but neatly to avoid the dough warming up, and try not to handle it with warm hands where possible. If you can work in a cold kitchen, do so as it allows you more time.

- Lightly flour your work surface and place your dough long side towards you. Place your butter in the centre so that it spans the entire height of the dough.
 - The *détrempe* should be very cold, and very firm although still flexible. Generally, the firmer the better as the dough is almost never too firm but often too soft. Test the pliability of the butter *before* placing it on the dough by gently bending it. If it feels too stiff, gently pat it down with the rolling pin a few times until it becomes flexible. Many recipes call for you to let the butter (and dough) warm up and become soft at this stage, but I recommend using cold butter that is tenderized with the rolling pin if you want more consistent results and better layers.

- Fold the outer edges over the top so that they meet symmetrically at the centre. Use your hands to pinch the two ends together so that they meet along the whole height of the dough, but leave the top and bottom free.
 - If they don't quite meet, stretch them a little bit or slightly roll out the dough. Don't worry if the butter pokes a little out of the top or the bottom, you want it to reach the entire length of the dough. Make sure that the layers are fairly even at this point, with no large build-ups of dough anywhere.
- Optional: Before rolling out, using a sharp knife slice along the creases of the dough where it has been folded, opening up the layers and relieving pressure. This also creates a more even layer when rolling out. You can do this at every stage, although be careful with the ends as sometimes you get a build up of butter poking out.
- Adjust the edges until they are straight, and then gently pat down the dough with the rolling pin to stick the layers together and loosen the butter up. Then using the pressing/ rolling technique from earlier, lengthen the dough until you get a long 50cm strip. The dough should be an even thickness throughout.
 - You want to apply very even but firm pressure when rolling, and regularly run your hands *underneath* the dough to move it and stop it sticking. Try to avoid pressing straight down with the rolling pin. If the dough isn't rolling out well, add a bit of flour underneath so that it can move.
 - Make sure to keep your edges straight and the ends nice and neat where possible, to avoid wastage!
- It is time to make the double fold. Turn the dough 90°, then fold the ends into the centre so that the edges meet in a straight line. It should look like a letter. As before, bring the edges together and pinch gently. Then fold the entire dough in half, like a book. You should end up with four layers stacked on one another.
 - For really good layers and consistent results, trim the edges carefully with a knife before folding to help them square off, and to remove the excess dough which does not contain a butter layer. Another useful tip is to wet your fingertips/a pastry brush in a bowl of cold water and sweep across any dough surfaces before folding. This removes excess flour from the surface and helps the layers to bind together better. Do this every time you fold.
- Cover well, and rest in the fridge for 45 minutes to an hour.
- Now it is time for the second fold. Place the dough in front of you on a lightly floured surface, with the open side of the fold to your right. Again, begin by patting the dough down and then roll out as described above until 50 cm long. You can either perform a '*tour simple*' or single fold, or another double.
 - The single fold will yield clearer layering and a more open crumb, whereas the double gives you more layers and a more complex structure. The single fold will also be slightly easier to roll out, so I recommend starting with this one.
- Rest again in the fridge for 45 minutes to an hour. This is the final fridge rest before shaping and proving.
- Roll out your dough to about 25x30 cm, and so it is roughly 3 mm thick. Make sure it is an even thickness throughout.
 - You want the dough to be 24x30 once you trim the edges and the top/bottom to make them neat, so keep this in mind when rolling out.
- Cut the dough into your desired shapes (for croissants, pain au chocolat, etc...) and form the pastries, placing them on a lined baking tray.

–Croissants are 8x30 cm triangles, whereas *pains au chocolat* are 8x15 rectangles. Having neatly cut edges is very important here, don't rush! A very sharp knife or razor blade is preferable here. Croissants should be gently stretched lengthways by about 3-4cm before rolling, and widthways at the top corners by about 1cm in each direction. Roll tightly and symmetrically so that you obtain 7 ridges.

- Proof the dough in a closed oven with the light on, along with a bowl of boiling water. They should prove for about 2 ½ hours, or until roughly doubled in size and wobbly when the tray moves. Do **not** exceed 30° C or the butter will leak out and the yeast will go into overdrive, or become denatured.

–Do **not** place the bowl of hot water underneath the trays, otherwise you will get melted butter leaking out and collapsing pastry. Place it next to or above the trays. Top up the boiling water every hour or so if you are able to for best results. Otherwise leave them for longer, like 3 hours or more. It is **so** important to be patient at this stage, as proofing really is everything! The worst thing is to have spent this long on the dough just to end up with dense, soggy croissants. Trust me, I've been there!

- Once the pastries have proven, take the leftover egg and whisk until runny. Using a pastry brush, evenly glaze the tops of the pastries, avoiding covering the layers.

–It is quite important to have a runny and smooth mixture if you want even and beautifully coloured croissants. To obtain this, add a few pinches of salt to the mixture. You can also add a bit of sugar or honey for some shine, and/or a touch of butter if you are worried about cracks forming. I would however stay away from using milk proteins where possible as this gives a much more earthy brown than the nice golden brown that eggs have.

- Preheat the oven to 180 for about 20 minutes, and then bake the pastries for about 15 minutes at 170°C with the fan on, or until a deep golden brown colour. As a rule of thumb, once they look ready, they probably need another 2 or so minutes to crisp up. Once out of the oven, cool them on a cooling rack for about 15-20 minutes.

–One final note (sorry!)

Letting them cool is more important than you might think, as tempting as it is to eat them piping hot. The inner structure needs to develop strength and moisture is still escaping as it cools. Failing to do this will mean biting into a slightly doughy and moist croissant rather than a crisp and fluffy one. Okay, now you really have earned the right to eat these!

I hope you have found this recipe helpful and have picked up a few (or more than a few) tips! It would certainly make all the hours I spent learning them the hard way worth it. Best of luck for making them!

Appendix- doubling the recipe...

- Make the beurrage about 15x20 cm or slightly larger.
- Roll out the dough to about 65 cm long instead of the usual 50.
- The final dough should measure around 50x30 instead of 25x30.