

Croissants



To make 10 Large Croissants

Ingredients

500g	Strong White Flour 13.5%
10g	Salt
25g	Unsalted Butter (softened)
50g	Caster Sugar
25g	Whole Milk Powder
130g	Water (32°C)
125g	Whole Milk (32°C)
12g	Active Yeast
.....	
250g	Cold Butter for lamination (at least 82% fat content)
.....	
2	Egg Yolk
8g	Double Cream
8g	Honey

Notes:

- 55% Dough Hydration
 - Aim to work in a room 20°C or below

 - Desired Dough Temp (DDT) formula:
(DDT x 2) - Room Temp (RT) = Liquid Temp (LT)
- Eg:
(26°C x 2) - 20°C = 32°C
DDT RT LT
- Lamination Butter needs to around 9°C to 12°C - this is it working temp. You want the butter to be plastic and bend without cracking, so its works with the dough.
 - Dough working temp around 2°C - 4°C
 - The added salt helps give strength to the gluten, gives yeast control and add flavour
 - The milk powder adds flavour and helps relax the gluten.

 - Use bags of frozen peas or sweetcorn as cooling blankets - rapid chill of the dough to maintain the working temperatures.

Method

Stage On, Make the dough

1. Sieve the flour and salt into the mixer bowl
2. Rub in the butter
3. Mix in the sugar & whole milk
4. Dissolve the yeast into the tepid water/milk. Mix well for 30secs, you should see bubbles on the surface - this indicates the yeast is active.
5. Add the water/milk/yeast to the dry mix
6. Mix well and bench knead for a 10-12mins or until you get a strong and elastic window pane test. ***** I prefer to hand knead this dough, it's important to really develop the gluten at this point.*
7. Shape to a ball and with a sharp knife, cut a 1/2" cross on the top.
8. Place in a bowl, cover and leave to 24°-26° C room temp (RT) for 40mins.



9. Gently shape your dough into an oblong (the cross in the dough once flatten out naturally creates the shape) wrap in plastic wrap and chill in the fridge (3°-4° C) for at least 2hrs, or for 15-18hrs, or if pushed for time 30mins in the freezer.
10. Prepare your greaseproof paper for your butter slab. Mark a rectangle 30x20cm and fold along the lines. This aids in the shaping of the butter
11. Final butter slab dims: 30cm x 20 cm
12. Place your butter on the grease proof, fold and using a rolling pin , roll into shape
13. Chill in the fridge for at least 1hr , or overnight up to 18hrs, or fast chill for 15mins in the freezer

Stage Two, Lamination 5-4-3 method. Makes 49 layers

Process:

Lock-in the butter - the 5 fold

Chill

90° Turn

4 fold

Chill

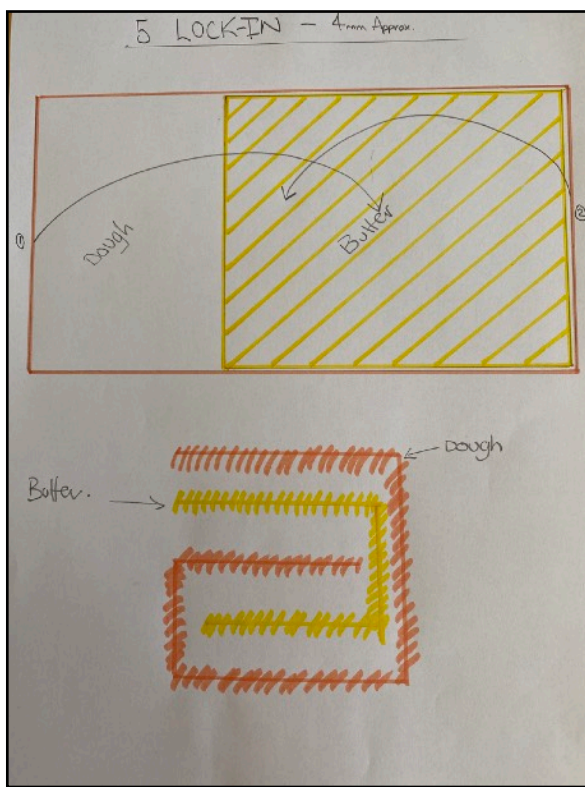
90° Turn

3 fold

Chill

5 Lock-In - 6mm approx thick sheet approx

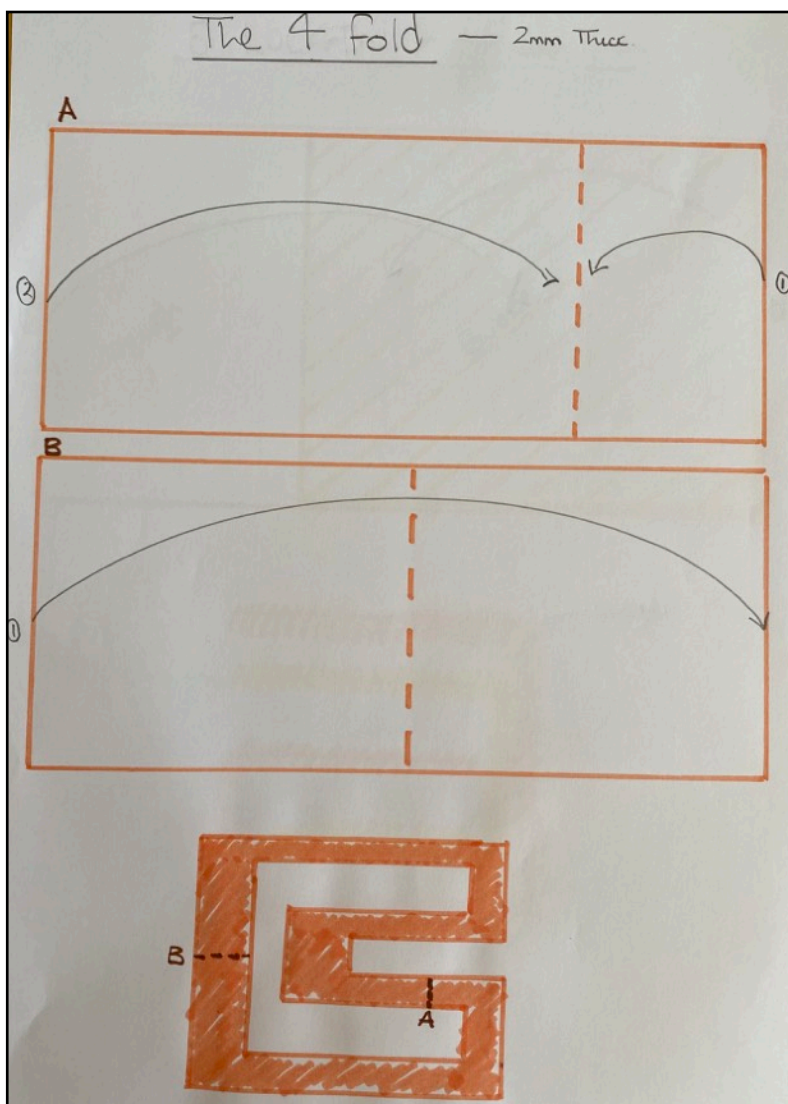
1. Check the temp of the dough, around 2-4°C will be fine
2. Roll the dough out to 45 cm x 20 cm long - applied a thin dusting of flour to prevent sticking of the dough
3. Brush the dough free of flour
4. Unwrap the butter slab and place on the rolled dough, over two thirds of the rolled dough
5. Fold the uncovered dough over onto the butter, then carefully fold the exposed butter/dough over the exposed dough (like a folded letter) and gentle roll with a rolling pin



6. Slice through the folds (to release tension)

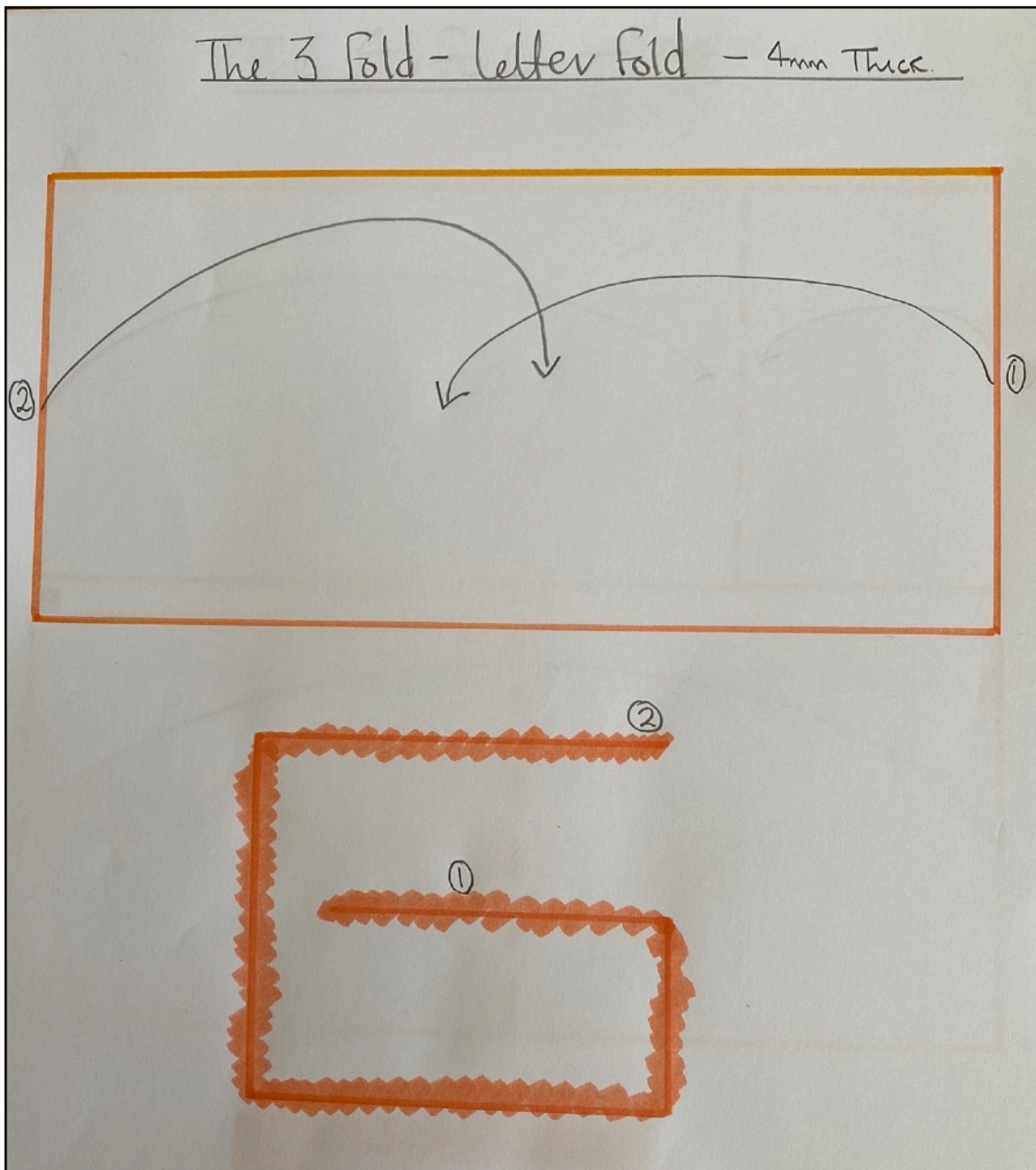
The 4 Fold - 2mm thick sheet

1. Turn the dough 90° from and rollout to 2mm thick
2. Take care to dust the surface and dough to prevent sticking.
3. **** if the dough gets to warm, cover in plastic wrap and cover with frozen peas/ sweetcorn for 15mins, to bring the temp down to around 10°C
4. Brush off the excess flour and spray with water (to aid the dough sticking together)
5. Do the 1st offset fold and seal with your fingers by pinching together, and gentle roll with a rolling pin.
6. Do the 2nd fold and seal with pinching with your fingers, and gently roll of the rolling pin
7. Brush off excess flour, spray with water , and fold in half
8. Gently roll to seal the layers and slice the folds.
9. Roll out to to 1.5cm thick (aids even chilling)
10. Wrap and chill for 40mins, or 15mins freezer.



The 3 fold / letter fold - 4mm thick

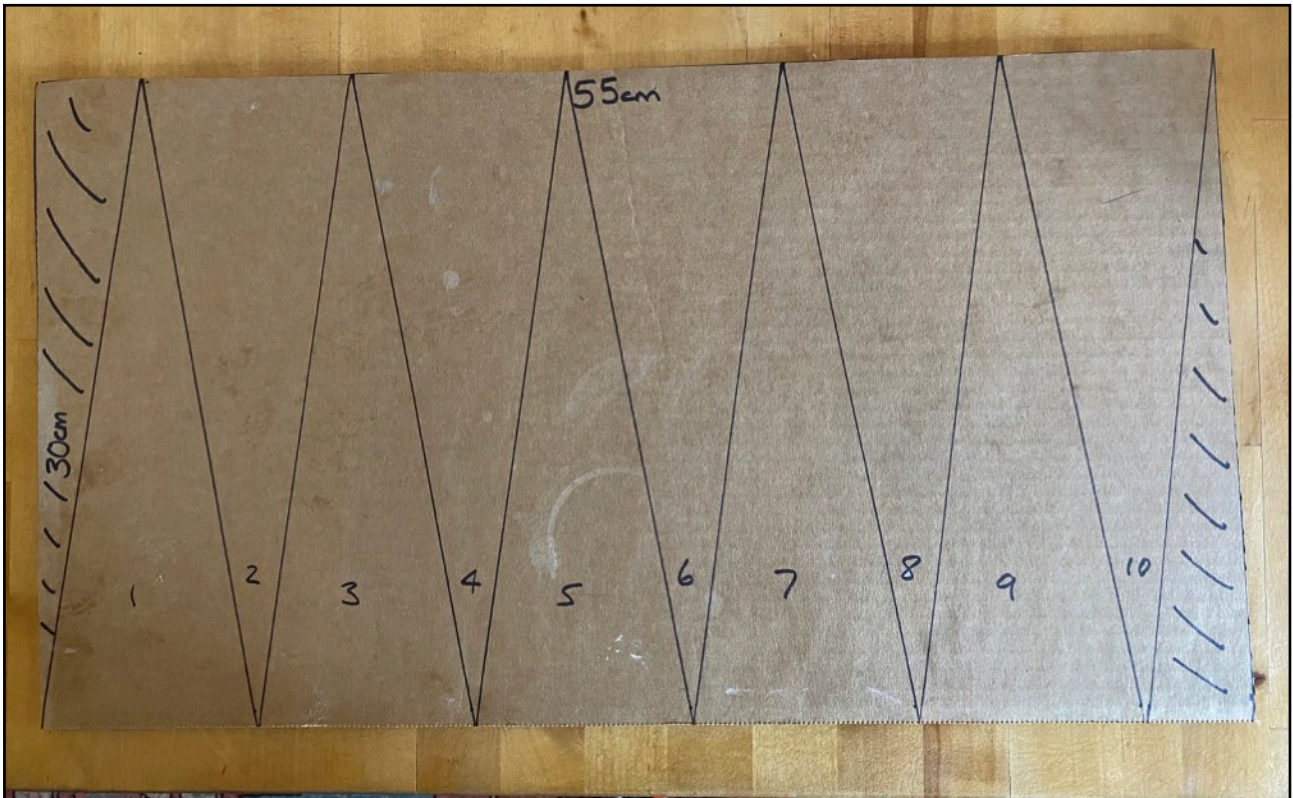
1. Roll out to 4 mm thick
2. Dust of the excess flour on the dough and spray lightly with water
3. Fold one end a over one third of the dough
4. Fold the other edge to meet the fold & edge
5. Gently roll to seal and slice the fold
6. Roll to to 1.5cm,
7. Wrap in plastic wrap and chill for 40mins, 15mins in the freezer.



Stage 3, Shaping & Baking

Shaping

1. Remove dough from the fridge. Lightly flour your work surface. Gently roll the dough to 50cm x 35cm and around 4mm thick. If the dough starts to resist too much or shrink back during this process you can fold it in thirds and give it a rest in the fridge for 10 to 20 minutes before continuing, or wrap in plastic wrap and pack with frozen peas.

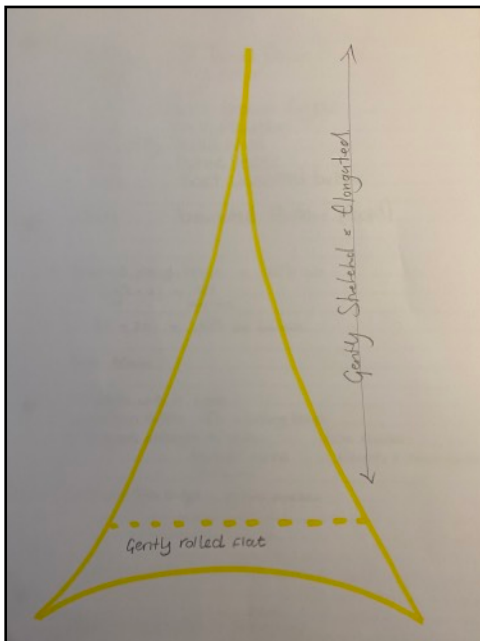


2. When your dough has reached its intended shape, carefully lift it a little to allow it to naturally shrink back from both sides. This way it will not shrink when you cut it. Your strip of dough should be long enough to allow you to trim the ends to make them straight and still be left with a length of about 100 cm.
3. For the next stage you will need a tape measure and a pizza wheel. Lay a tape measure along the top of the dough. With the wheel you mark the top of the dough at 10cm intervals along the length. Now lay the tape measure along the bottom of the dough and make a mark at 5cm. Then continue to make marks at 10cm intervals from this point. Once marked this should make 10 large croissants.
4. Using a long ruler and a pizza wheel make diagonal cuts lining up the marks made. Make diagonal cuts along the entire length of the dough. Then change the angle and make cuts from the other top corner to the bottom mark to create triangles. Again repeat this along the length of the dough. This way you will end up with 10 triangles and a 2 end pieces of dough.

5. Place the triangles onto a lined baking tray, cover in plastic wrap, and chill for 20mins



6. Removed from the fridge, working with two triangles at a time, and using a small rolling pin. Roll the bottom edge of the triangles, to make a flat and slightly splayed bottom.
7. Now very gently elongate each triangle to about 25 cm, into the shape of the “Eiffel Tower”



8. Now gently roll over the bottom edge, roll back and forth a couple of times, the gently roll with full length of the hand.
9. Holding the ends of the half rolled croissants, gently roll the until you reach the end.
10. Place on the lined baking tray, triangle tip on the underneath of the croissant, give a gentle push on the top to prevent the croissant from rolling.

Proving

1. Arrange the shaped croissants on baking sheets, making sure to keep enough space between them so they will not touch when proofing and baking. Combine the egg yolk with the cream & honey, and whisk until smooth. Give the croissants their first thin coating of egg wash **** only glaze the flat surfaces and try not to glaze the layers.*
2. Boil the kettle and pour an amount into a oven proof baking dish. Place this in the base of the oven. Take a reading of the temperature (you'll need a portable oven probe, or laser thermometer for this). Open the oven door to allow excess heat out until the overall temp of the oven is stable at around 26°C with 75% - 80% humidity (having the humidity on proving is important)
3. Proof the croissants in the temp controlled oven at an ideal temperature of 76°F to 79°F/24°C to 26.5°C (above that temperature there is a big chance butter will leak out!), and continue to monitor this temp thought the proofing process
4. If the temp is dropping below 24°C, add a cup of boiling water and monitor the temp rise.
5. The proofing should take about 2.5 -3 hrs. You should be able to tell if they are ready by carefully shaking the baking sheet and see if the croissants grow in size, have a wiggle when the tray is gently shaken. You should also be able to see the layers of dough when looking at your croissants from the side.



6. 15mins before baking, give the croissants their second thin coat of egg/cream/honey wash - be very gentle and use a small artists brush. And allow to sit for 10mins before baking

Baking

1. Pre-heat the oven to 220°C 1/2hr before baking. When heated up, put the glazed croissants in the oven and directly lower it to 175°C.
2. Bake them for 10 minutes , then turn the trays and then bake for a further 10 - 15 mins.
3. Remove from the oven and allow to cool on a cooling rack