



THE SCHOOL OF
ARTISAN FOOD

Term One

Key Stages of Bread Making Process – Dough Rheology

Roon-G

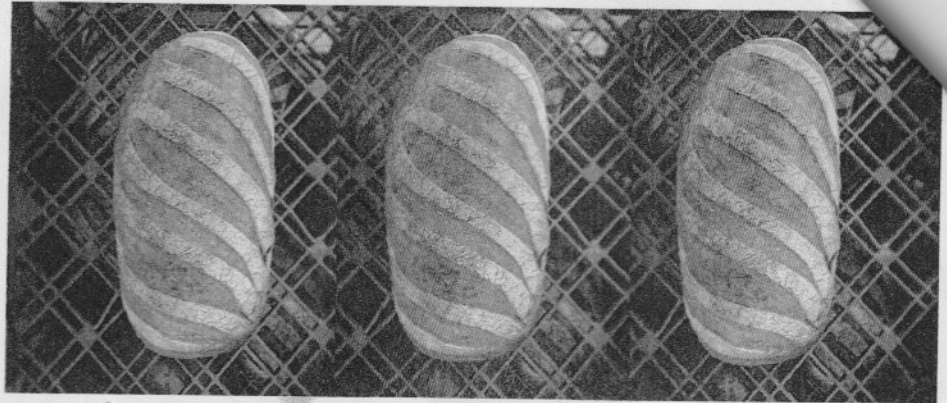
Bloomers and Ciabatta

With Kevan Roberts

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ciabatta

White farmhouse, Bloomers & Tin bread

Hybrid recipe using a combination of wild yeast and fresh yeast.

Dough yield = 33

Scaling weight = 500g

BT = 60°C

FDT = 24°C

Recipe

Ingredients	Sponge g	%	Dough g	Bakers %	Overall formula g	
T65	3000	100		70	3000	10000
Marriages superfines flour			7000		7000	
Water	1800	60	4400	62	6200	
Fresh yeast			50	0.5	50	
Wheat levain starter	300	10			300	
Mature levain			5100	51	5100	
Salt			200	2	200	
Butter			100	1	100	
Light malt flour			30	0.3	30	
TOTAL	5100		16883			

*Sponge → pre ferment → for flavour
Artisan bread taste better*

Different breads different Hydration

Method

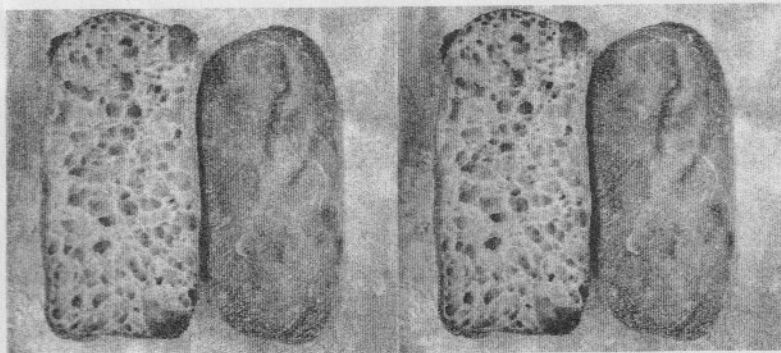
Key stage	Comments
Mature Levain	Combine, flour, water, salt, and wheat levain starter and mix together. Allow to ferment at 18°C for 12 – 18 hours.
Dough mixing	Place all the ingredients into a spiral mixer. Mix on slow speed until gluten development has been achieved. Check FDT to ensure optimum temperature has been reached. <u>Mixing guideline</u> Mixer type = Spiral mixer. Speed 1 = 8 minutes. Speed 2 = 2 minutes.
Bulk fermentation	Remove dough from the mixer and place into a lightly oiled dough container. Fold to neaten and cover. <u>Bulk ferment</u> 30 minutes at 22°C. 24 hours at 4°C. <i>If cut up only 30m + 22°C</i>
Folding	Neatly stretch and fold the dough inside the container. Take care not to rip the dough. <i>Same folds as ciabattina</i>
Dividing, pre-shape and bench rest	Tip out the dough out onto the workbench. Cut the dough into even portions using a metal scraper, each weighing 500g. Apply even tension to shape the pieces into rounds and evenly distribute onto wooden proving boards. Cover and rest for 10 minutes. <u>Shaping</u> Scaling weight = 500g Pre-shape = round Bench rest = 10 minutes
Final shaping	After resting, apply tension to shape the dough into a batard.

Final proof	Place the shaped dough onto a board, that has been covered with a floured couche, and prove. <u>Final proof</u> Proving time = 1 - 2 hours Proving temperature = 22°C.
Finishing	Gently position the batards evenly onto an oven setter. Score the tops diagonally, seven times. <u>Finishing</u> Score = x7 diagonally.
Baking	Use the setters to load the batards into the oven. Inject a full amount of steam, ensure the dampers are closed. Release the damper after 25 minutes. Remove from the oven after 35 minutes (approx.) with a bakers' peel and place into cooling baskets. <u>Baking</u> Oven type = deck Temperature = 230°C Steam = full Baking time = 35 minutes Damper release = 25 minutes

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Ciabatta with Biga

Classic Italian bread, which is literally translated to mean "slipper", due to its shape. Ciabatta is a super hydrated dough that uses a biga for pre-ferment, and double hydration to achieve a very open and porous texture.

Dough yield = 31

Scaling weight = 550g

BT = 58°C

FDT = 24°C

Recipe

$$BT - (\text{Room temp} + \text{Flour temp})$$

$$58 - (21.7 + 18) = 18.3^{\circ}\text{C}$$

Ingredients	Biga g	Dough g	2 nd Stage Water	Bakers %	Overall formula g
T65 flour	5000			50	5000
Marriages superfines flour		5000		50	5000
Water	3000	3500	2000	85	8500
Yeast	5	34		0.4	40
Salt		200		2	200
Biga		8005		80	8005
Extra virgin olive oil		100		1	100
TOTAL	8005	17239			5000

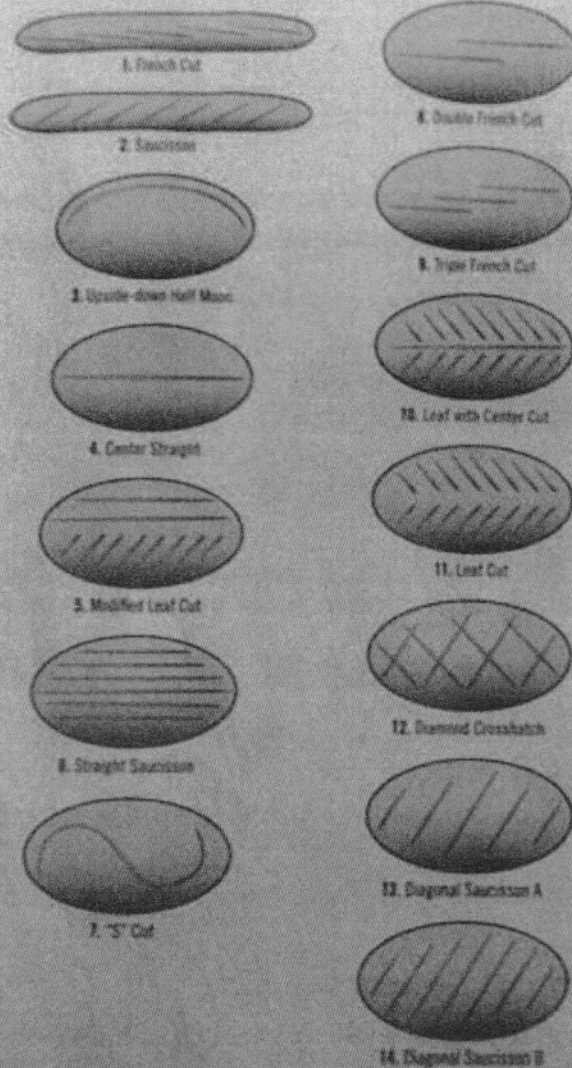
Method

Key stage	Comments
Biga	Disperse yeast into water and add flour. Mix until the dough comes together. Cover and bulk ferment for 12 to 18 hours ideally at 18°C.
Dough mixing	Add the flour, salt, biga, first stage water and yeast to the mixer. Mix on slow speed for 8 minutes, until the dough starts to appear developed. Gradually add in second stage water. Dough should appear soft but with tenacity. Finally mix through the oil. <u>Mixing guideline</u> Mixer type = Spiral mixer. Speed 1 = 8 minutes Speed 2 = 6 minutes (add second stage water) Speed 2 = 30 seconds (add oil)
Bulk fermentation	Remove dough from the mixer and place into a lightly oiled dough container. Fold to neaten and cover. Prove for 3 hours at ambient. <u>Bulk ferment</u> Bulk ferment = 3 hours Fermentation temperature = 22°C. <i>If divided into 4 do 30 mins</i>
Folding	Use wet hands to stretch and fold the dough, taking care not to tear. Folds = x4 @ 20-minute intervals <i>Fold inwards front/back 1/40° repeat</i>
Dividing & Shaping	Gently tip out the dough onto flour, flour the top, and tamp out to even. Using a baguette peel, or metal scraper, cut the dough in half lengthways. Push the sections apart to prevent sticking. Portion each half into slipper shapes, each weighing 550g. Gently pick up each portion and place, bottom down, onto a couche (dusted with semolina). <u>Shaping</u> Scaling weight = 550g Pre-shape = none Final shape = slipper

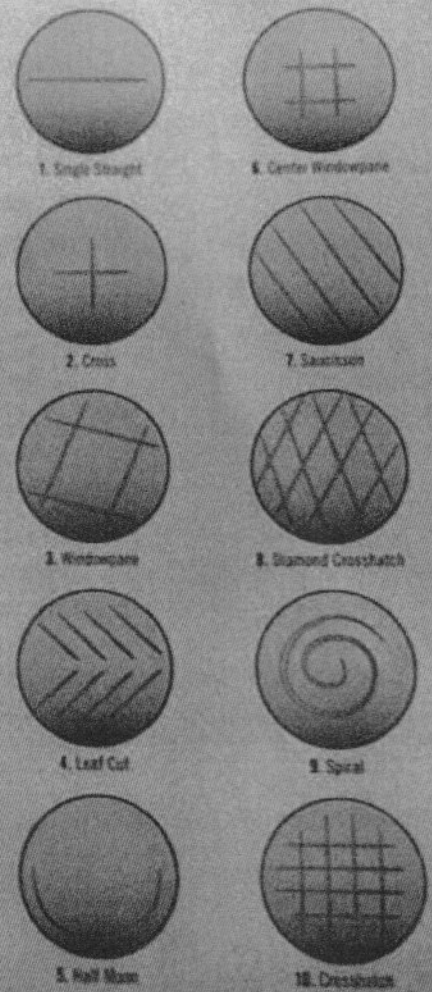
Final Fermentation	Cover the shaped dough and prove for 10 – 20 minutes. <u>Final proof</u> Proving time = 10-20 minutes. Proving temperature = 22°C.
Baking	Ensure the damper is closed. Very gently transfer the dough from the couche to the oven setter and evenly distribute to avoid batching, taking care not to de-gas. Quickly load into the oven and inject the 1 second of steam. Release after 20 minutes. Remove from oven when optimum bake is achieved. <u>Baking</u> Oven type = Deck Temperature = 230°C Steam = 1 second Baking time = 30 minutes Damper release = 20 minutes

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Baguette and Bâton Scoring



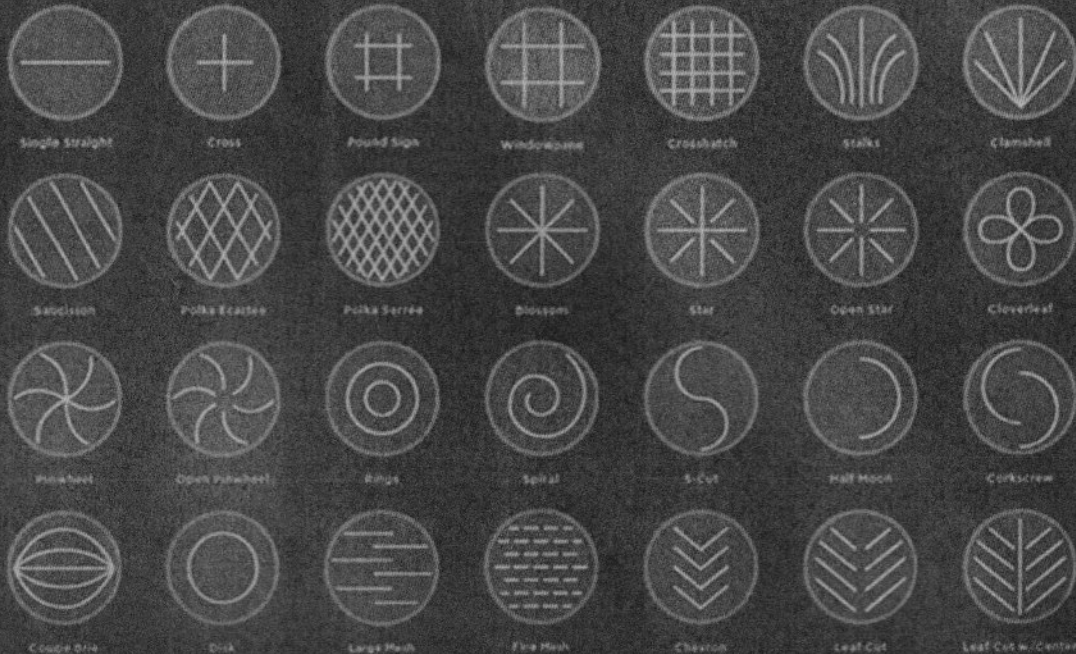
Round Scoring



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KNOW THE SCORE: BOULES

A DAOBREAD INFOGRAPHIC



WHY SCORE BREAD?

(ALSO CALLED SLASHING OR DOCKING)

HISTORICAL: IN THE DAYS OF YORE, WHEN PEOPLE LIVED IN VILLAGES AND ONLY HAD ACCESS TO COMMUNITY OVENS, FAMILIES WOULD MARK OR "SIGN" THEIR LOAVES WITH THEIR SCORING PATTERN SO THEY COULD IDENTIFY THEIR BREAD AT THE END OF THE COMMUNAL BAKE.

PRACTICAL/ARTISAN: BREAD IS SCORED JUST BEFORE THE BREAD IS PLACED IN THE OVEN. THIS ALLOWS BREAD TO PROPERLY EXPAND IN THE OVEN WITHOUT TEARING THE CRUST & ALSO ALLOWS THE RELEASE OF MOISTURE & CARBON DIOXIDE TO ESCAPE FROM THE LOAF. PROPER SCORING ALSO ALLOWS THE BAKER TO CONTROL THE **BLOOM**. THIS SIGNIFICANTLY IMPROVES THE APPEARANCE OF BAKED LOAVES.



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The baguette

Campagne baguette with firm levain

A versatile dough used to create a variety of decorative breads and baguettes.

Dough yield = 50

Drop weight = 350g

BT = 60°C

FDT = 24°C

Recipe

Ingredients	Levain (g)	%	Dough (g)	Second stage water	%	Overall Formula (g)
T65 flour	1500	100	7600		91	9100
T170 rye flour			900		9	900
Fresh yeast			70		0.7	70
Salt			200		2	200
Wheat levain starter	150	10			1.5	150
Water	900	60	5600	800	73	7300
Mature wheat levain			2550		25.5	2550
TOTAL	2550		17720			

$$17720 \div 5 = 3544$$

$$(2550 + 17720) \div 3 = 6750g$$

Method

Key stage	Comments
Levain mixing <i>do day before</i>	Add the wheat levain starter to the flour and water and mix until the dough comes together. Cover and ferment for up to 12 hours at 22°C (room temperature). <u>Mixing guideline</u> Mixer type = spiral Slow speed = 3 mins
Autolyse mixing <i>Time for dough to rest After mixing</i>	Mix the flour and water. Mix on slow speed until almost smooth. Place dough into a container, cover and leave to autolyse for 60 minutes. <u>Mixing guideline:</u> Mixing time = 4 minutes Mixing speed = 1 Autolyse time = 30 minutes Holding temperature = 22°C
Dough mixing	Return the dough to the mixer and add the salt, yeast and levain. Mix on slow speed until good gluten development has been achieved. Check FDT to ensure that the dough has reached optimum temperature. <i>24°C</i> <u>Mixing guideline</u> Mixer type = Spiral mixer. Speed 1 = 4 minutes, adding salt, levain and yeast. Speed 2 = 3 minute, adding second stage water.
Bulk fermentation <i>same time</i>	Remove dough from the mixer and place into a lightly oiled dough container. Fold to neaten and cover. <u>Bulk ferment</u> 2 hours at 22°C.
Folding	Neatly stretch and fold the dough inside the container. Take care not to tear the dough. Folds: x2 @ 30-minute intervals

some products have delayed salt times

1hr folding other 1hr sit and see

1hr total

Temp controls the fermentation time

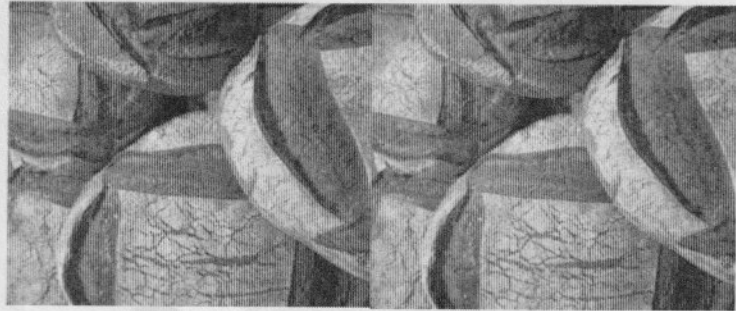
Baguette

Dividing and shaping	Tip out the dough onto the workbench. Use a metal scraper to cut the dough into even portions, each weighing <u>350g</u>. Apply even tension to shape the pieces into batards and distribute onto wooden proving boards. Cover and rest for 20 minutes. <u>Shaping</u> Scaling weight = <u>350g</u> Pre-shape = batards Bench rest = <u>20 minutes</u> Resting temperature = <u>22°C</u>
Final shaping	After resting, apply tension to shape the dough into desired shape. Final shape = various <i>to long strips / slits</i>
Final fermentation	Place the shaped dough onto boards covered with floured couches. Cover and leave to prove. <u>Final proof</u> Proving time = 60 minutes. Proving temperature = <u>24°C</u>.
Baking	Ensure dampers are closed. Load into the oven using setters and inject a full amount of steam. Release the damper as needed. Remove from the oven once optimal bake has been achieved. <u>Baking</u> Oven type = deck Temperature = <u>240°C</u> Steam = full Baking time 18 mins Damper release = After 10mins of baking

*bassinage → the second stage water added later to not overwhelm dough and achieve higher hydration without making over sticky → more crumb / better handling
gluten development in dryer environment*



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Pain de Campagne

A hearty bread with a toothsome crust and slightly open crumb texture. Made with a mix of T80 and wholemeal flour, with a dark rye levain to achieve a rich molasses flavour with lactic and acetic back notes.

Dough yield = 18

Scaling weight = 975g

Baked weight = 800g

BT = 58°C

FDT = 24°C

Recipe

Ingredients	Rye levain (g)	%	Dough (g)	Second stage water	%	Overall formula (g)		
T85 flour			8000		80	100	8000	10000
Wholemeal flour			1000		10		1000	
T170 rye flour	1000	100			10		1000	
Salt			200		2	200		
Water	1000	100	5500	800	73	7300*		
Yeast			50		0.5	50		
Mature rye levain			2100		21	2100		
Rye levain starter	100	10			1	100		
TOTAL	2100		17650					

*Adjust water level accordingly

$$(2100 + 17650) \div 3 = 7983$$

Autolyse → Needs the time for a fully mix
and flour to fully be hydrolyzed into
the mix. Activate enzymes / gluten strengthen

Method

Key stage	Comments
Mature rye levain	Mix the rye levain starter, water and T170 rye flour. Cover and bulk ferment for 12 – 18 hours at room temperature (18°C). <u>Mixing guideline:</u> Hand mix
Autolyse (optional)	Mix flours, mature rye levain and first stage water together, on slow speed until combined. Remove from the mixer, cover, and allow to autolyse for 30 minutes. <u>Mixing guideline:</u> Speed 1 = 4 minutes. Autolyse time = 30 minutes. Holding temperature = 22°C.
Dough mixing	Return the dough to the mixer, add in the salt and yeast. Mix on slow speed until good gluten development has been achieved. Add second stage water on fast speed and check FDT. <u>Mixing guideline</u> Mixer type = Spiral. Speed 1 = 8 minutes (add salt and yeast) Speed 2 = 2 minutes (adding second stage water)
Bulk fermentation	Place the dough into a lightly oiled container and fold to neaten. Cover. <u>Bulk ferment</u> 2 hours at 22°C.
Folding	Neatly stretch and fold the dough in the container. Take care not to tear the dough. <u>Folding</u> x1 at 60 minutes.
Divide and bench rest	Tip out the dough onto the workbench. Use a metal scraper to cut the dough into even portions, each weighing 975g. Apply even tension to shape the pieces into rounds and distribute onto wooden proving boards. Cover and rest for 20 minutes.

What is it?

	<u>Shaping</u> Scaling weight = 975g Pre-shape = round Bench rest = 20 minutes Resting temperature = 22°C.
Final shaping and finishing	Apply even tension to the dough and shape into a round, without tearing the dough. Place the dough, smooth side down, into a pre-dusted proving basket with T80. Final shape = round Proving medium = T80 dusted boule banneton.
Final proving	Cover and prove for 30 minutes at ambient and then 60 minutes at 4°C. <u>Final proof</u> Proving medium = boule bannetons Proving time/temperature = 30 minutes at 22°C, then 60 minutes at 4°C.
Baking	Ensure the damper is closed. Load into the oven, using a setter, and inject full steam. Release damper after 30 minutes and bake for another 10 – 15 minutes. <u>Baking</u> Oven type = Deck Temperature = 240°C Steam = Full Baking time = 40 - 45 minutes Damper release = 30 minutes

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