



## 4 Grain Italian Bread from Hydration Test

Learn how to test the hydration percentage of your flour, and bake a loaf of bread with it. Do NOT follow my water amounts in this recipe - it is an exercise in learning the IDEAL hydration for the grains you have in your kitchen. They will vary batch to batch. It's also a great way to learn how to make bread and hydrate the flour without a mixer.

### Ingredients

- 100 g wheat berries, hard (Red Fife)
- 100 g wheat berries, hard (Rouge de Bordeaux)
- 100 g wheat berries, Spelt
- 100 g wheat berries, Khorasan (Kamut)
- 368 g water, cold (this was the amount of water used in MY experiment) yours will vary.)
- 8 g sea salt
- 8 g lemon, juice (or other citrus juice)
- 80 g sourdough starter, stiff (I didn't measure - one big scoop 80-100 grams guess)

### Directions

1. Mill 100 grams of each type of grain into it's own container with room for mixing
2. Start by adding 68 grams of water to each jar, and mix the flour with the water. Write that number down on paper. Observe the mixture in the jar. Does it look dry? If so go to the next step.
3. Add 5 grams of water to the jar, write down how much water you added, and mix together well.
4. Observe the mixture in the jar, does it look dry at all? If so, go back to the previous step.
5. Take it out and play with the dough: Notice if it's strong, and elastic. Do the windowpane test. Does it fall apart when you try? If so move on to the next step. If the dough feels dry in some places, go back 2 steps.
6. If the dough fell apart, your ideal hydration is the amount of water added to the dough BEFORE this last increase of water. If the dough feels fully hydrated and did not fall apart - your ideal hydration is the total amount of water in the jar.
7. Mixing the Bread:
8. Add all the dough to your mixing bowl, and add the salt, lemon juice, yeast (if using) and sourdough starter. Knead with your hands until well combined, or use your stand mixer to combine the ingredients. The dough should be smooth, shiny and have an incredible window pane.
9. Transfer the dough into an oiled bowl with plenty of room to rise and a lid.
10. Do your first set of stretch and folds in a 2.5 quart mixing bowl to help develop structure in your dough.
11. When the dough rises by 50%, shape the dough and place it into a bread pan (greased or lined).
12. Preheat the oven to 450 F.
13. Bake the bread in your bread pan, covered with a second pan turned upside down for 30 minutes.
14. Check the temperature of the absolute middle of the loaf, and remove from the oven if 190 F or above.
15. If not to temp, bake another 10-15 minutes without the lid and re-check the temperature of the dough. We are aiming for anything in the 190 - 209 F range.
16. When bread has reached the ideal temperature, remove the bread from the oven, and from the pan it baked in (if using a dutch oven).
17. Place the bread gently on a cooling rack with air flow all around the loaf for 3 hours.

### Notes