

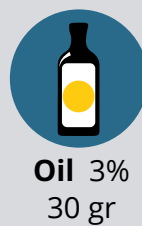
BAKER'S PERCENTAGE GUIDE

To have control and consistency in our recipes and process, we need to understand how to write a recipe and how to modify its elements when a change is needed.

The best way to do this is by using Baker's Percentage. This is a simple but very effective method to adjust recipes since it is based on the percentage system. Developing your recipe with baker's percentage becomes your instruction manual for your dough.

The baker's percentage is the proportion of all ingredients in the dough relative to the weight of the flour, not the total weight of the dough. We are going to use the metric system because it is more accurate and easier to follow. Keep in mind that 1-kilogram equals 1000 grams.

For Example



Here is how a recipe would look:

As you can see, the weight of the ingredients is translated into a percentage of the flour's weight. Every time we create a recipe, we will have the exact proportion of ingredients we are going to use, and it is easy to make changes to the recipe if needed.

Based on this example we know that our dough is at 65% hydration, the salt at 2.5% and so on.

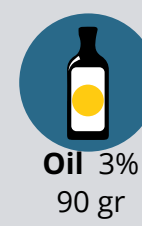
Water, beer and juice are considered hydration factors; oils, eggs, fats and other liquid ingredients are not; even though they will confer a softer dough texture, like when adding water.

Now that we know a little about the tool, let's go through some examples.

To determine the recipe, we use the percentages we want to achieve, then multiply the weight of the flour by the percentage of each ingredient. Here is how we calculate the amount of water needed in this recipe:

$$3000 \text{ (weight of flour)} \times .65 \text{ (\% of water in the recipe)} = 1,950 \text{ gr of water needed}$$

For Example



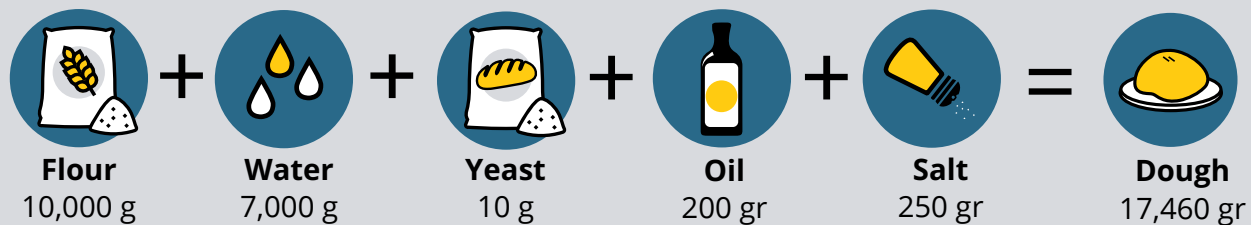
Here is how a recipe would look:

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It's important to note the percent of yeast in this recipe is less than 1 percent. Don't forget when calculating the amount of yeast to make sure you include the decimal point. In the example on the previous page, yeast is .2% which means 6 grams, not 60 grams.

Now let's say we have a recipe expressed in weight without knowing the percentage of each ingredient and we want to know the baker's percentage. To do this, simply divide the weight of each ingredient by the weight of the flour and multiply by 100.

Once the recipe is defined the sum of the total weight of the ingredients will give us the total weight of our dough and help us to determine the number of dough balls we will make from our recipe. To calculate the total weight of the ingredients simply add up all ingredients:

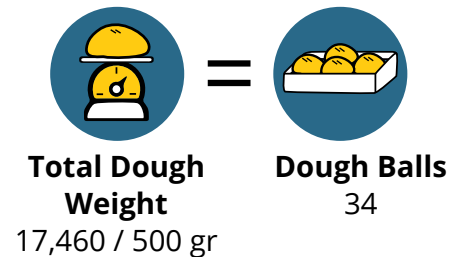


Now that we know the total of our dough, simply divide by the weight of the dough ball

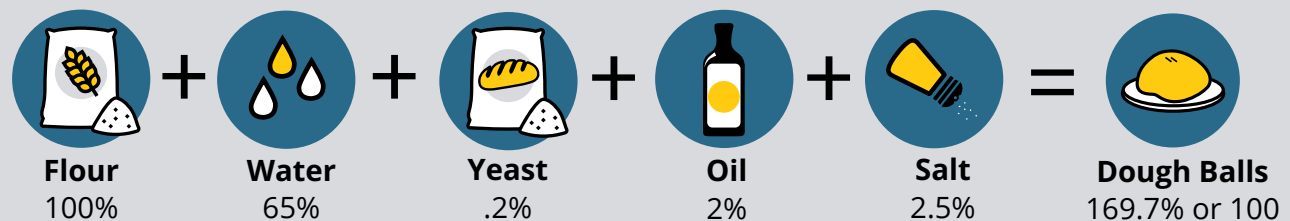
Example Total Dough Weight $17,460 / 500 \text{ gr} = 34 \text{ pieces}$

If we know the number of dough balls we need, we can determine the amount of dough we need to make by reversing the calculation.

Example Dough Ball Weight 500 gr. Number of dough balls needed: 100
• $500\text{gr} \times 100 = 50,000\text{gr}$ (50kg)



Since we know the percentage of each ingredient, we can easily calculate our dough recipe. Let's use the 50 kg example from above



First divide the dough weight with the total percentage of all the ingredients to obtain the flour weight.

Dough weight: 50 kg

$50,000\text{gr} / 1.697 = 29,463\text{gr}$ (Total flour weight) rounded to 29,500 gr for easier scaling process, it will change our final weight to 50,061 gr.

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Now we will proceed to create our dough recipe by multiplying the flour weight by each percentage needed.

- **Flour** $29,500\text{gr} = 29.5\text{kg}$
- **Water** $29.5\text{kg} \times 65\% = 19.175\text{kg}$ (19,175gr)
- **Yeast** $29.5\text{kg} \times 0.2\% = 0.059\text{kg}$ (59gr)
- **Salt** $29.5\text{kg} \times 2.5\% = 0.7375\text{kg}$ (737.5gr)
- **Oil** $29.5\text{kg} \times 2\% = 0.59\text{kg}$ (590gr)



Once you have your recipe set, you won't need to do all these calculations each day, it's just important to learn this valuable tool to help you.

If your team struggles to learn the metric system or you don't want to introduce a different way of weighting the ingredients, convert the recipe to the Imperial system once and follow it.