Baker's Percentage: Ingredient Weights and Hydration

Ingredient weights from baker's percentages on flour weight, or scaled to a total dough weight, with the dough hydration.

Method: Baker's percentage (flour = 100 %)

Input parameters

Unit system: SI

Parameter	Value	Unit
Flour weight (used when total dough is 0)	10.000	kg
Total dough wanted (0 = use flour weight)	0	kg
Water	65.000	%
Salt	2.0000	%
Yeast	1.5000	%
Sugar	3.0000	%
Fat	3.0000	%

Calculated results

Parameter	Value	Unit
Flour	10.000	kg
Water	6.5000	kg
Salt	0.20000	kg
Yeast	0.15000	kg
Sugar	0.30000	kg
Fat	0.30000	kg
Total dough	17.450	kg
Total formula percentage	174.50	%

Notes for this case

• Baker's percentages express every ingredient as a share of the flour weight (flour = 100 %), so recipes scale simply and doughs compare at a glance; water as a percentage of flour is the hydration (about 55–60 % for firm bread doughs, 70 % and above for open-crumb breads). To make a given dough weight, divide it by the total formula percentage to get the flour, then multiply out. Allow a few per cent extra for scaling losses.

Formula and method

$$m_i = x_i m_f, \quad m_f = \frac{m_t}{1 + \sum x_i}$$

Variables

m_f	Flour weight (used when total dough is 0)	kg
m_t	Total dough wanted (0 = use flour weight)	kg
w	Water	-
s	Salt	-
y	Yeast	-
x_{su}	Sugar	-
x_{ft}	Fat	-
m_w	Water	kg

m_s	Salt	kg
m_y	Yeast	kg
m_{su}	Sugar	kg
m_{ft}	Fat	kg
m	Total dough	kg
$\sum$	Total formula percentage	-

Method and standards

Baker's percentage.

Assumptions and limits

- Flour basis.

References

Baker's percentage (flour = 100 %)

Report details

Report reference	FCC-2X81-296N (the same inputs always give the same reference)
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Calculator	Baker's Percentage: Ingredient Weights and Hydration
Method last reviewed	17 November 2026
Software release	FireCAD Calc, release of 22 November 2026
Release checks	3 reference cases of this calculator, computed independently, are checked on every release

Results are for engineering estimation. Verify critical designs against the referenced standards and your own data.

This calculator online

https://calc.firecad.com/chemical/food-dairy/bakers-percentage

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.