

## Belgian Dubbel #2 - Browar na Wyżynie

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **25**
- SRM **19.7**
- Style **Belgian Dubbel**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.3 liter(s)**
- Boil time **90 min**
- Evaporation rate **20 %/h**
- Boil size **29.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **22.7 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **17.7 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale Castle Malting	3.5 kg (63.1%)	80 %	9
Grain	pszeniczny Soufflet	0.5 kg (9%)	80 %	5
Grain	Cara Gold Castle Malting	0.5 kg (9%)	78 %	120
Grain	Château Special B Castle Malting	0.5 kg (9%)	77 %	300
Grain	pszeniczny czekoladowy Fawcett	0.05 kg (0.9%)	72 %	1100
Sugar	cukier kandyzowany	0.5 kg (9%)	--- %	2

### Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	lunga (Polishhops) - granulat	20 g	100 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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FM27 Artefakty trapistów (3 pokolenie)	Ale	Slant	300 ml	Fermentum Mobile
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### Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	4 g	Mash	60 min
Water Agent	chlorek wapnia	4 g	Mash	60 min
Water Agent	kwas fosforowy 75% - zacier	2 g	Mash	60 min
Water Agent	kwas fosforowy 75% - wysładzanie	2 g	Mash	60 min
Water Agent	cukier kandyzowany	500 g	Boil	30 min
Fining	Mech irlandzki	2 g	Boil	15 min

### Notes

- <https://www.brewersfriend.com/mash-chemistry-and-brewing-water-calculator/?id=BLX430V>  
 Ca+2 Mg+2 Na+ Cl- SO4-2 HCO  
 53.2 0.0 131.0 69.8 85.7 5.282  
 Mash pH \*: 5.23  
 SO42-/Cl- ratio: 1.2 Balanced  
 Pitch Rate As-Is: 0.85M cells / mL / °P  
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