

## dubbel ver.2017

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- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **18**
- SRM **16.9**
- Style **Belgian Dubbel**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **4 %**
- Size with trub loss **20.5 liter(s)**
- Boil time **90 min**
- Evaporation rate **5 %/h**
- Boil size **22.9 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **20.9 liter(s)**

### Steps

- Temp **65 C**, Time **1 min**
- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **15.3 liter(s)** of strike water to **69.8C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **1 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **22.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale	4 kg (66.1%)	80 %	7
Grain	Monachijski	1 kg (16.5%)	80 %	16
Grain	Special B Malt	0.25 kg (4.1%)	65.2 %	315
Grain	crystal	0.2 kg (3.3%)	75 %	400
Grain	Aromatic Malt	0.2 kg (3.3%)	78 %	51
Sugar	cukier brown	0.2 kg (3.3%)	100 %	34
Sugar	kandyzowany	0.2 kg (3.3%)	100 %	32

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	40 g	75 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
m21	Ale	Dry	10 g	jack