

## Warka nr 23 Belgian Dubbel

- Gravity **18.9 BLG**
- ABV **8.2 %**
- IBU **20**
- SRM **12.9**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.9 liter(s)**
- Total mash volume **13.2 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **2 min**

### Mash step by step

- Heat up **9.9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **6.1 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.5 kg (67.6%)	80 %	4
Grain	Strzegom Wiedeński	0.5 kg (13.5%)	79 %	10
Grain	Strzegom Karmel 300	0.2 kg (5.4%)	70 %	299
Grain	Karmelowy Czerwony	0.1 kg (2.7%)	75 %	59
Sugar	Cukier kandyzowany biały	0.4 kg (10.8%)	--- %	---

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	15 g	60 min	7 %
Aroma (end of boil)	Hallertau Spalt Select	8 g	10 min	3.4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM28 Habit opata	Ale	Liquid	1000 ml	Fermentum Mobile