

## #077 Doppelbock

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- Gravity **19.1 BLG**
- ABV **8.3 %**
- IBU **24**
- SRM **21**
- Style **Doppelbock**

### Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **11.5 %/h**
- Boil size **25.6 liter(s)**

### Mash information

- Mash efficiency **68 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **23 liter(s)**
- Total mash volume **31.2 liter(s)**

### Steps

- Temp **52 C**, Time **20 min**
- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **10 min**
- Temp **100 C**, Time **20 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **23 liter(s)** of strike water to **57.7C**
- Add grains
- Keep mash **20 min** at **52C**
- Keep mash **20 min** at **62C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Keep mash **10 min** at **72C**
- Keep mash **20 min** at **100C**
- Sparge using **10.8 liter(s)** of **76C** water or to achieve **25.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski typ II 20-25 EBC Weyermann	6.2 kg (75.6%)	80 %	20
Grain	Strzegom Pilzneński	1.5 kg (18.3%)	80 %	4
Grain	Słód Caramunich Typ II Weyermann	0.4 kg (4.9%)	73 %	120
Grain	Carafa III	0.1 kg (1.2%)	70 %	1400

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	11.5 %
Boil	Hallertau Mittelfruh	30 g	20 min	3.8 %
Boil	Hallertau Mittelfruh	20 g	10 min	3.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	1000 ml	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Fining	whirfloc T	1.25 g	Boil	10 min
Other	pożywka dla drożdży	10 g	Boil	10 min