

## pils

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **38**
- SRM **3.8**
- Style **Bohemian Pilsener**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **15.9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (94.3%)	81 %	4
Grain	Carapils	0.3 kg (5.7%)	78 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Saaz (Czech Republic)	50 g	60 min	4.5 %
Boil	Saaz (Czech Republic)	20 g	20 min	4.5 %
Boil	Saaz (Czech Republic)	30 g	10 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
fm 30	Lager	Liquid	1000 ml	fermentum

### Extras

Type	Name	Amount	Use for	Time
Water Agent	kwas	5 g	Mash	80 min

Fining	wirflock	5 g	Mash	5 min
--------	----------	-----	------	-------