

## Pils

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **23**
- SRM **3.7**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **23.5 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

### Steps

- Temp **55 C**, Time **10 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **10.5 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **40 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **23.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	3.2 kg (91.4%)	82 %	4
Grain	Monachijski	0.3 kg (8.6%)	80 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	20 g	60 min	4.7 %
Boil	Sladek	20 g	15 min	7.6 %
Aroma (end of boil)	Sladek	10 g	0 min	7.7 %
Aroma (end of boil)	Saaz (Czech Republic)	10 g	0 min	4.5 %