

## Pils

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **17**
- SRM **7.8**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20.6 liter(s)**
- Total mash volume **25.8 liter(s)**

### Steps

- Temp **68 C**, Time **20 min**
- Temp **72 C**, Time **50 min**
- Temp **76 C**, Time **3 min**

### Mash step by step

- Heat up **20.6 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **20 min** at **68C**
- Keep mash **50 min** at **72C**
- Keep mash **3 min** at **76C**
- Sparge using **10.3 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pilsen Malt	5 kg (97.1%)	80.5 %	3
Grain	Strzegom Czekoladowy jasny	0.15 kg (2.9%)	68 %	400

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	10 g	50 min	10 %
Aroma (end of boil)	Marynka	30 g	5 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
W34/70	Lager	Dry	11.5 g	Fermentis