

## Simple Pils

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **38**
- SRM **3.6**
- Style **German Pilsner (Pils)**

### 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 **15 %/h**
- Boil size **27.6 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.5 kg (90%)	81 %	4
Grain	Bobik	0.5 kg (10%)	50 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	40 min	15.5 %
Whirlpool	Citra	25 g	10 min	12 %
Whirlpool	Cascade PL	25 g	10 min	7.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Diamond lager	Lager	Slant	100 ml	Lallemand