

# pils

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- Gravity **11.2 BLG**
- ABV ---
- IBU **33**
- SRM **3.8**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.5 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **38 C**, Time **15 min**
- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **41C**
- Add grains
- Keep mash **15 min** at **38C**
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **29.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzniejszy	5 kg (100%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	9.4 %
Boil	Lublin (Lubelski)	30 g	10 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
brewmaster pils	Lager	Dry	20 g	---