

# polski pils

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **38**
- SRM **5**
- 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 **31.7 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **23.2 liter(s)**
- Total mash volume **29.9 liter(s)**

## Steps

- Temp **55 C**, Time **5 min**
- Temp **62 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **23.2 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **15 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	6 kg (90.4%)	80 %	4
Grain	Karmelowy Jasny 30EBC	0.635 kg (9.6%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	marynka	35 g	60 min	8.4 %
Boil	lubelski	35 g	15 min	6 %
Boil	lubelski	30 g	5 min	6 %
Aroma (end of boil)	lubelski	30 g	0 min	6 %
Aroma (end of boil)	marynka	20 g	0 min	8.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Culture	--- g	Fermentum Mobile

## Extras

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Fining	tabletko wirfloc	2 g	Boil	10 min