

Pils

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **42**
- SRM **3.5**
- 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 **60 min**
- Evaporation rate **15 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **20.5 liter(s)**

Steps

- Temp **45 C**, Time **0 min**
- Temp **52 C**, Time **15 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **15.9 liter(s)** of strike water to **48.6C**
- Add grains
- Keep mash **0 min** at **45C**
- Keep mash **15 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (87.9%)	80 %	4
Grain	Weyermann - Carapils	0.4 kg (8.8%)	78 %	4
Grain	Weyermann - Acidulated Malt	0.15 kg (3.3%)	80 %	6

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	10.5 %
Boil	Tettnang	20 g	40 min	4.5 %
Boil	Tettnang	20 g	20 min	4.5 %
Boil	Tettnang	20 g	7 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	450 ml	Fermentis

Extras

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

Type	Name	Amount	Use for	Time
Fining	Mech Irlandzki	6 g	Boil	15 min