

polski pils

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **28**
- SRM **3.7**
- 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 **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **81 %**
- Liquor-to-grist ratio **4.2 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **26 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **55.8C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **60 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **9.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilznieński	5 kg (100%)	81 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	9.4 %
Aroma (end of boil)	Lublin (Lubelski)	20 g	10 min	4.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	23 g	Fermentis