

Pieprzowy Bitter

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **46**
- SRM **3.7**
- Style **Standard/Ordinary Bitter**

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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **62 C**, Time **35 min**
- Temp **72 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **35 min** at **62C**
- Keep mash **60 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (100%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	20 min	13.5 %
Boil	Marynka	30 g	15 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	30 g	5 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-189	Lager	Dry	11.5 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Spice	Czarny Pieprz	15 g	Boil	15 min