

Bismarck

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **36**
- SRM **3.7**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **27 liter(s)**

Steps

- Temp **55 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **15 min**
- Temp **100 C**, Time **10 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **30 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **76C**
- Keep mash **10 min** at **100C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	6 kg (100%)	81 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	10 g	60 min	13.5 %
Boil	Marynka	15 g	60 min	8 %
Boil	Hallertau Blanc	20 g	20 min	8 %
Boil	Perle	15 g	20 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP800 - Pilsner Lager Yeast	Lager	Liquid	20 ml	---

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
Water Agent	Cukier	149 g	Bottling	---