

German Pils na PWZ3

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **37**
- SRM **4.1**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **17.6 liter(s)**
- Total mash volume **23.1 liter(s)**

Steps

- Temp **53 C**, Time **10 min**
- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **17.6 liter(s)** of strike water to **58.2C**
- Add grains
- Keep mash **10 min** at **53C**
- Keep mash **45 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Pilsen	5 kg (90.9%)	80.5 %	4
Grain	Monachijski	0.4 kg (7.3%)	80 %	16
Grain	Weyermann - Acidulated Malt	0.1 kg (1.8%)	80 %	6

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	13.5 %
Boil	Tradition	10 g	20 min	5.4 %
Boil	Hallertau Spalt Select	10 g	20 min	3.4 %
Boil	Tradition	10 g	10 min	5.5 %
Boil	Hallertau Spalt Select	10 g	10 min	3.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Wyeast - Bohemian Lager	Lager	Liquid	12 ml	Wyeast Labs
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