

## Pils v2

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **28**
- SRM **3.8**
- 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 **80 min**
- Evaporation rate **15 %/h**
- Boil size **28.8 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20.8 liter(s)**
- Total mash volume **26 liter(s)**

### Steps

- Temp **46 C**, Time **1 min**
- Temp **50 C**, Time **10 min**
- Temp **64 C**, Time **60 min**
- Temp **76 C**, Time **15 min**

### Mash step by step

- Heat up **20.8 liter(s)** of strike water to **49.3C**
- Add grains
- Keep mash **1 min** at **46C**
- Keep mash **10 min** at **50C**
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **76C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Pilsneński	4.5 kg (86.5%)	80.5 %	4
Grain	Bestmalz - Monachijski	0.2 kg (3.8%)	80 %	16
Grain	Rice, Flaked	0.5 kg (9.6%)	70 %	2

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hersbrucker	20 g	30 min	4.1 %
Boil	Tettnang	10 g	30 min	4 %
Boil	Hersbrucker	20 g	20 min	4.1 %
Boil	Tettnang	15 g	20 min	4 %
Aroma (end of boil)	Hersbrucker	20 g	10 min	4.1 %
Aroma (end of boil)	Tettnang	15 g	10 min	4 %
Aroma (end of boil)	Hersbrucker	20 g	5 min	4.1 %
Aroma (end of boil)	Tettnang	10 g	5 min	4 %
Aroma (end of boil)	Hersbrucker	20 g	1 min	4.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Opshaug	Ale	Slant	50 ml	Priv
Fermentacja w temperaturze 25-28				

## Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc	1.25 g	Boil	5 min
Fining	Żelatyna	3 g	Secondary	3 day(s)

## Notes

- Woda kranowa  
Nagazowanie celować w 2.7  
*Feb 4, 2021, 9:42 AM*