

# Pils polsko-niemiecki

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **48**
- SRM **3.8**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.3 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **34.4 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **4.9 liter(s) / kg**
- Mash size **28.3 liter(s)**
- Total mash volume **34 liter(s)**

## Steps

- Temp **50 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **71 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **28.3 liter(s)** of strike water to **53.1C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **30 min** at **63C**
- Keep mash **40 min** at **71C**
- Keep mash **10 min** at **78C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **34.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (86.7%)	80 %	4
Grain	Monachijski	0.52 kg (9%)	80 %	16
Grain	Weyermann - Carapils	0.25 kg (4.3%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Columbus/Tomahawk/Zeus	10 g	80 min	15.5 %
First Wort	Sybilla	40 g	80 min	6.5 %
Boil	Sybilla	20 g	15 min	6.5 %
Aroma (end of boil)	Sybilla	40 g	0 min	6.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	200 ml	---

## Extras

Type	Name	Amount	Use for	Time
Fining	whirlfloc	1 g	Boil	15 min

### Notes

- 100 wody RO  
Ca 21  
Mg 5  
Na 8  
SO 43  
Cl 23  
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