

# Polski Pils

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **36**
- SRM **3.6**
- 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 **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **19 liter(s)**

## Steps

- Temp **64 C**, Time **45 min**
- Temp **70 C**, Time **15 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **14.3 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **70C**
- Keep mash **0 min** at **78C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4 kg (84.2%)	82 %	4
Grain	Strzegom Wiedeński	0.5 kg (10.5%)	79 %	10
Grain	Weyermann - Carapils	0.25 kg (5.3%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	lunga	20 g	60 min	11 %
Boil	Lublin (Lubelski)	20 g	30 min	4 %
Boil	Lublin (Lubelski)	30 g	10 min	4 %
Aroma (end of boil)	Lublin (Lubelski)	50 g	0 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Slant	200 ml	Fermentum Mobile
Lutra OYL-071	Ale	Slant	50 ml	Omega

## Extras

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Water Agent	Gips piwowarski	9 g	Mash	60 min
Water Agent	Chlorek Wapnia	3 g	Mash	60 min
Water Agent	Kwas mlekowy 80%	1.3 g	Mash	0 min
Water Agent	Kwas mlekowy 80%	0.8 g	Mash	45 min
Fining	Whirflock	2.5 g	Boil	15 min
Other	Pożywka dla drożdzy	4 g	Boil	15 min

## Notes

- Dodatek 0.8ml Kwasu mlekowego 80% do zacieru dla korekty ph na 5,4. Dodatek 1.3ml Kwasu mlekowego 80% do wody do wyładzania.  
 Profil wody (jasny, chmielowy):Ca-96,6/Mg-4/Na-4/Cl-56.8/SO4-152.7/HCO3-26.45/  
 Dodatek 1 łyżeczki pożywki dla drożdzy i 1 tabletki whirflock na 15 minut gotowania.  
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