

## Pils PL

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **44**
- SRM **4.5**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **0 %**
- Size with trub loss **22 liter(s)**
- Boil time **90 min**
- Evaporation rate **12 %/h**
- Boil size **27.3 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilsner® 2,5-4,5 EBC Weyermann	4 kg (80%)	80 %	4
Grain	słód monachijski	0.5 kg (10%)	79 %	15
Grain	cara clair	0.3 kg (6%)	78 %	4
Grain	Carahell	0.2 kg (4%)	77 %	26

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	marynka	25 g	60 min	9 %
Boil	Marynka	30 g	20 min	9 %
Aroma (end of boil)	Lublin (Lubelski)	35 g	0 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
w 34-70	Lager	Slant	200 ml	---

### Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	6 g	Boil	10 min