

## pils

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **34**
- SRM **3.7**
- 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 **75 min**
- Evaporation rate **10 %/h**
- Boil size **25.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **65 C**, Time **15 min**
- Temp **75 C**, Time **45 min**
- Temp **79 C**, Time **5 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **15 min** at **65C**
- Keep mash **45 min** at **75C**
- Keep mash **5 min** at **79C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (100%)	81 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	30 g	60 min	4 %
Boil	Marynka	25 g	30 min	10 %
Boil	Marynka	25 g	0 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Gozdawa - W35 German Lager	Lager	Slant	200 ml	gęstwa słoik