

## pierwszy pils

- Gravity **13.6 BLG**
- ABV ---
- IBU **28**
- SRM **4.4**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 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 **55 C**, Time **20 min**
- Temp **64 C**, Time **25 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **20 min** at **55C**
- Keep mash **25 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (100%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	30 g	60 min	4.5 %
Boil	Saaz (Czech Republic)	20 g	30 min	4.5 %
Boil	Saaz (Czech Republic)	20 g	10 min	4.5 %
Dry Hop	Ahtanum	30 g	4 day(s)	5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
s-23	Lager	Dry	11.5 g	---