

## Wariacje Pils

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **24**
- SRM **11.6**
- Style **Bohemian Pilsener**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.3 liter(s)**
- Total mash volume **24.4 liter(s)**

### Steps

- Temp **64 C**, Time **25 min**
- Temp **72 C**, Time **45 min**

### Mash step by step

- Heat up **18.3 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **25 min** at **64C**
- Keep mash **45 min** at **72C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (82%)	80 %	4
Grain	Strzegom Wiedeński	0.7 kg (11.5%)	79 %	11
Grain	Strzegom Monachijski typ I	0.2 kg (3.3%)	79 %	16
Grain	Strzegom Karmel 600	0.2 kg (3.3%)	68 %	601

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	50 g	45 min	4.5 %
Aroma (end of boil)	Saaz (Czech Republic)	50 g	5 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M84 Bohemian Lager	Lager	Dry	10 g	Mangrove Jack's