

## Pils\_IV\_23

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **24**
- SRM **5**
- Style **Munich Helles**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 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 **68 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (80%)	80 %	4
Grain	płatki ryżowe	0.5 kg (10%)	90 %	0
Grain	Biscuit Malt	0.5 kg (10%)	79 %	45

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Strisselspalt	50 g	60 min	3.3 %
Boil	Strisselspalt	50 g	10 min	3.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
diamond	Lager	Dry	22 g	lallemand

### Extras

Type	Name	Amount	Use for	Time
Flavor	Syrop z ekstraktami z pędów sosny i kwiatów czarnego bzu	300 g	Boil	1 min