

## #100 koźlak

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- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **25**
- SRM **16.7**
- Style **Traditional Bock**

### Batch size

- Expected quantity of finished beer **12.7 liter(s)**
- Trub loss **10 %**
- Size with trub loss **14 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **17.5 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **22.4 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **68 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **17.4 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **5.1 liter(s)** of **76C** water or to achieve **17.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	3 kg (60.3%)	79 %	22
Grain	Strzegom Wiedeński	1.5 kg (30.2%)	79 %	10
Grain	Melanoiden Malt	0.25 kg (5%)	80 %	39
Grain	Strzegom Karmel 600	0.1 kg (2%)	68 %	601
Grain	Biscuit Malt	0.125 kg (2.5%)	79 %	45

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	12 g	40 min	5.5 %
Boil	Perle	20 g	40 min	7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - 2308 munich lager	Lager	Slant	150 ml	---

### Extras

Type	Name	Amount	Use for	Time
Fining	Wirflok	1 g	Boil	10 min

## Notes

- Karmelowy 600 dodać na początku przerwy 68st.

Fermentacja

8 (4dni) - 9 (3dni) - 10 (3dni) - 11 (4dni) - 12 (4dni) - 16 (4dni)

Piwo zajęło 6 miejsce na MPPD '22

*Mar 29, 2022, 6:10 PM*