

## #08 Koźlak

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- Gravity **17.3 BLG**
- ABV **7.4 %**
- IBU **21**
- SRM **14.5**
- Style **Traditional Bock**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **0 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.4 liter(s)**
- Total mash volume **28.6 liter(s)**

### Steps

- Temp **55 C**, Time **10 min**
- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **35 min**
- Temp **76 C**, Time **15 min**

### Mash step by step

- Heat up **21.4 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **60 min** at **64C**
- Keep mash **35 min** at **72C**
- Keep mash **15 min** at **76C**
- Sparge using **13.6 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słodownia Strzegom - pilzneński	4 kg (55.9%)	80 %	3
Grain	Słodownia Strzegom - monachijski I	2 kg (28%)	79 %	12
Grain	Słodownia Strzegom - karmelowy 600	0.1 kg (1.4%)	69 %	600
Grain	Caramunich Malt	0.25 kg (3.5%)	71.7 %	110
Grain	Caramel/Crystal Malt - 10L	0.25 kg (3.5%)	75 %	200
Grain	Słodownia Strzegom - karmelowy 150	0.25 kg (3.5%)	76 %	150
Grain	Malteurop - pszeniczny	0.3 kg (4.2%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	9.5 %
Boil	Lublin (Lubelski)	15 g	20 min	4 %

Boil	Tradition	15 g	50 min	5.5 %
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## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W34/70	Lager	Culture	340 g	---