

## 40. Koźlak

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- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **26**
- SRM **18.4**
- Style **Traditional Bock**

### Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **20.7 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **15.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **66C**
- Keep mash **30 min** at **72C**
- Sparge using **9.9 liter(s)** of **76C** water or to achieve **20.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.5 kg (48.3%)	80 %	4
Grain	Strzegom Monachijski typ I	2 kg (38.6%)	79 %	16
Grain	Karmelowy Jasny 30EBC	0.43 kg (8.3%)	75 %	30
Grain	Carafa	0.25 kg (4.8%)	70 %	664

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	8.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
w34/70	Lager	Slant	150 ml	---