

## Koźlak 23

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **26**
- SRM **15.9**
- Style **Traditional Bock**

### Batch size

- Expected quantity of finished beer **33 liter(s)**
- Trub loss **5 %**
- Size with trub loss **34.6 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **43.1 liter(s)**

### Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **30.3 liter(s)**
- Total mash volume **40.4 liter(s)**

### Steps

- Temp **63 C**, Time **50 min**
- Temp **72 C**, Time **60 min**
- Temp **78 C**, Time **4 min**

### Mash step by step

- Heat up **30.3 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **50 min** at **63C**
- Keep mash **60 min** at **72C**
- Keep mash **4 min** at **78C**
- Sparge using **22.9 liter(s)** of **76C** water or to achieve **43.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	6 kg (59.4%)	80 %	16
Grain	Pilzneński	1.5 kg (14.9%)	81 %	4
Grain	Strzegom Wiedeński	1.5 kg (14.9%)	79 %	10
Grain	Weyermann - Melanoiden Malt	0.5 kg (5%)	81 %	53
Grain	Strzegom Karmel 150	0.3 kg (3%)	75 %	150
Grain	Strzegom Karmel 600	0.3 kg (3%)	68 %	601

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	25 g	60 min	13 %
Aroma (end of boil)	Magnum	10 g	20 min	13 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Dry	500 g	Fermentis