

Koźlak

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **26**
- SRM **19.9**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **16.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.7 liter(s)**
- Total mash volume **15.6 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **11.7 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **8.8 liter(s)** of **76C** water or to achieve **16.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	2.25 kg (57.7%)	80 %	16
Grain	Pilzneński	1 kg (25.6%)	81 %	4
Grain	Viking melanoidynowy	0.2 kg (5.1%)	75 %	60
Grain	Strzegom Karmel 150	0.3 kg (7.7%)	75 %	150
Grain	Strzegom Karmel 600	0.15 kg (3.8%)	68 %	601

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	17 g	60 min	10 %