

Koźlak

- Gravity **16.8 BLG**
- ABV ---
- IBU **24**
- SRM **21.4**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.8 liter(s)**
- Total mash volume **14.4 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **45 min**

Mash step by step

- Heat up **10.8 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **45 min** at **72C**
- Sparge using **5.5 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.2 kg (61.1%)	81 %	4
Grain	Strzegom Monachijski typ II	1 kg (27.8%)	79 %	22
Grain	Strzegom Karmel 300	0.2 kg (5.6%)	70 %	299
Grain	Caraamber	0.1 kg (2.8%)	75 %	59
Grain	Carared	0.1 kg (2.8%)	75 %	39

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	10 g	60 min	10 %
Boil	Lublin (Lubelski)	15 g	10 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	11.5 g	Fermentis