

Koźlak

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **28**
- SRM **18.1**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **10 %**
- Size with trub loss **19.8 liter(s)**
- Boil time **90 min**
- Evaporation rate **13 %/h**
- Boil size **25.8 liter(s)**

Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **27.6 liter(s)**
- Total mash volume **34.5 liter(s)**

Steps

- Temp **64 C**, Time **20 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **27.6 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **20 min** at **64C**
- Keep mash **50 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **5.1 liter(s)** of **76C** water or to achieve **25.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Bonlander Munich Malt	4 kg (58%)	78 %	20
Grain	Weyermann - Bohemian Pilsner Malt	2 kg (29%)	81 %	4
Grain	Strzegom Karmel 150	0.2 kg (2.9%)	75 %	150
Grain	Weyermann - Caraamber	0.4 kg (5.8%)	75 %	65
Grain	Weyermann - Carared	0.2 kg (2.9%)	75 %	45
Grain	Jęczmień palony	0.1 kg (1.4%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	28.13 g	60 min	7.6 %
Boil	Lublin (Lubelski)	33.75 g	10 min	5.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Lallemand	Lager	Slant	200 ml	---
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