

Koźlak Wędzony

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **23**
- SRM **20**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **13 %/h**
- Boil size **25.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **31.5 liter(s)**

Steps

- Temp **63 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **24.5 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **8.3 liter(s)** of **76C** water or to achieve **25.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Smoked Malt	3.8 kg (54.3%)	81 %	6
Grain	BESTMALZ - Best Minich	2 kg (28.6%)	80.5 %	16
Grain	Monachijski typ II 20-25 EBC Weyermann	0.4 kg (5.7%)	80 %	20
Grain	Caramunich® typ I	0.5 kg (7.1%)	73 %	80
Grain	Strzegom Karmel 300	0.2 kg (2.9%)	70 %	299
Grain	Weyermann - Carafa III Special	0.1 kg (1.4%)	5 %	1300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	23 g	60 min	10.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
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WLP833 - German Bock Lager Yeast	Lager	Liquid	40 ml	White Labs
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