

Koźlak Dubeltowy

- Gravity **22.5 BLG**
- ABV **10.2 %**
- IBU **25**
- SRM **26.9**
- Style **Doppelbock**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **100 min**
- Evaporation rate **13 %/h**
- Boil size **17.3 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **24.1 liter(s)**
- Total mash volume **30.8 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 **24.1 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **-0.1 liter(s)** of **76C** water or to achieve **17.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski typ II 20-25 EBC Weyermann	3 kg (44.8%)	80 %	20
Grain	BESTMALZ - Best Minich	1.2 kg (17.9%)	80.5 %	16
Grain	Pilzneński	1.5 kg (22.4%)	81 %	4
Grain	Caramunich® typ I	0.4 kg (6%)	73 %	80
Grain	Weyermann Caramunich 3	0.25 kg (3.7%)	76 %	150
Grain	BESTMALZ - Best Melanoidin Light	0.25 kg (3.7%)	75 %	50
Grain	Weyermann - Carafa III Special	0.1 kg (1.5%)	5 %	1300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	20 g	60 min	10.3 %
Aroma (end of boil)	Hallertauer Tradition	30 g	0 min	5.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP833 - German Bock Lager Yeast	Lager	Slant	250 ml	White Labs