

kožlak

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **30**
- SRM **14**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.6 liter(s)**
- Total mash volume **28.8 liter(s)**

Steps

- Temp **50 C**, Time **20 min**
- Temp **64 C**, Time **20 min**
- Temp **73 C**, Time **40 min**

Mash step by step

- Heat up **21.6 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **20 min** at **64C**
- Keep mash **40 min** at **73C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Vienna Malt	2.1 kg (29.2%)	81 %	7
Grain	Monachijski typ II 20-25 EBC Weyermann	3.3 kg (45.8%)	80 %	20
Grain	Caraaroma	0.3 kg (4.2%)	--- %	400
Grain	Weyermann - Melanoiden Malt	0.5 kg (6.9%)	81 %	53
Grain	Weyermann - Pilsner Malt	1 kg (13.9%)	81 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	10 g	60 min	12 %
Boil	Saaz (Czech Republic)	30 g	20 min	4.5 %
Boil	Tradition	60 g	20 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
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FM31 Bawarska Dolina	Lager	Slant	350 ml	Arktos
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