koźlak

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **20**
- SRM **8.6**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.7 liter(s)**
- Total mash volume **27.9 liter(s)**

Steps

- Temp **62 C**, Time **35 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **21.7 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **35 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **10.9 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	3.2 kg *(51.6%)*	80 %	16
Grain	Wędzony bukiem Viking Malt	2.6 kg *(41.9%)*	82 %	10
Grain	Karmelowy Jasny 30EBC	0.4 kg *(6.5%)*	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	35 g	60 min	5.5 %
Boil	Hallertau	15 g	10 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M84 Bohemian Lager	Lager	Dry	10 g	Mangrove Jack's

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.