

Koziołek

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **20**
- SRM **14.3**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **50 liter(s)**
- Trub loss **5 %**
- Size with trub loss **52.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **63.3 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **61.3 liter(s)**
- Total mash volume **78.8 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **61.3 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **63.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Mep©Lager Malteurop	5 kg (28.6%)	80 %	3
Grain	Mep©Pilsner Malteurop	5 kg (28.6%)	80 %	4
Grain	SŁÓD WIEDEŃSKI Optima Poznań	3 kg (17.1%)	80 %	10
Grain	SŁÓD MONACHIJSKI Optima Poznań	3 kg (17.1%)	80 %	19
Grain	Cookie Viking Malt	1 kg (5.7%)	80 %	50
Grain	Karmelowy 600EBC Viking Malt	0.5 kg (2.9%)	80 %	600

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	45 min	10 %
Boil	Lublin (Lubelski)	50 g	10 min	4 %