

## #B013 KOZŁAK

- Gravity **19.1 BLG**
- ABV **8.3 %**
- IBU **34**
- SRM **14.4**
- Style **Traditional Bock**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **9 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2 kg (36.4%)	82 %	4
Grain	Strzegom Monachijski typ I	1 kg (18.2%)	79 %	16
Grain	Strzegom Wiedeński	1 kg (18.2%)	79 %	10
Grain	Karmelowy Czerwony	1 kg (18.2%)	75 %	59
Sugar	Brown Sugar, Dark	0.5 kg (9.1%)	100 %	99

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
W34/70	Lager	Dry	11 g	---

### Notes

- 24.11.2021 = warzenie
- 25.11.2021 = start fermentacji 11,5C 20BLG
- Nov 3, 2021, 8:38 PM