

# BOCK KOŻLAK

---

- Gravity **18.2 BLG**
- ABV **7.8 %**
- IBU **21**
- SRM **16.1**
- Style **Traditional Bock**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **28.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.6 liter(s)**
- Total mash volume **30.2 liter(s)**

## Steps

- Temp **62 C**, Time **15 min**
- Temp **72 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **22.6 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **15 min** at **62C**
- Keep mash **60 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **28.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	4 kg (53%)	79 %	16
Grain	Strzegom Wiedeński	2 kg (26.5%)	79 %	10
Grain	Strzegom Monachijski typ II	1 kg (13.2%)	79 %	22
Grain	Strzegom Czekoladowy jasny	0.25 kg (3.3%)	68 %	400
Grain	Viking Melanoidynowy	0.3 kg (4%)	75 %	60

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	hallertauer tradition	40 g	50 min	5 %
Boil	hallertauer tradition	20 g	15 min	5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	150 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	WIRFLOCK	5 g	Boil	10 min