

# 1 - Kozlak

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- Gravity **18 BLG**
- ABV **7.7 %**
- IBU **28**
- SRM **11.4**
- Style **Traditional Bock**

## Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **34.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **32.6 liter(s)**
- Total mash volume **41.9 liter(s)**

## Steps

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

## Mash step by step

- Heat up **32.6 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **34.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (32.3%)	81 %	4
Grain	Monachijski	3 kg (32.3%)	80 %	16
Grain	Strzegom Wiedeński	2 kg (21.5%)	79 %	10
Grain	Karmelowy Jasny 30EBC	0.8 kg (8.6%)	75 %	30
Grain	Strzegom Karmel 600	0.5 kg (5.4%)	68 %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau	15 g	60 min	4.5 %
Boil	Magnum	25 g	50 min	13.5 %
Aroma (end of boil)	Saaz (Czech Republic)	20 g	10 min	4.5 %