

## Kozlak No. 45

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- Gravity **19.6 BLG**
- ABV **8.6 %**
- IBU **16**
- SRM **26.6**
- Style **Eisbock**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

### Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **79 C**, Time **20 min**

### Mash step by step

- Heat up **24 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **20 min** at **79C**
- Sparge using **9.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	4 kg (50%)	79 %	22
Grain	Słód Caramunich Typ II Weyermann	3 kg (37.5%)	73 %	120
Grain	Monachijski Ciemny Steinbach	1 kg (12.5%)	100 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	20 g	60 min	7 %
Boil	Challenger	10 g	30 min	7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	30 ml	Fermentum Mobile