

## 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 |