

# Kozlak

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **32**
- SRM **9.8**
- Style **Traditional Bock**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.1 liter(s)**
- Total mash volume **12.1 liter(s)**

## Steps

- Temp **55 C**, Time **10 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **9.1 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **9.1 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

| Type  | Name               | Amount         | Yield | EBC  |
|-------|--------------------|----------------|-------|------|
| Grain | słód monachijski   | 1.8 kg (59.6%) | 80 %  | 13.5 |
| Grain | Słód Pilzneński    | 1 kg (33.1%)   | 80 %  | 4    |
| Grain | Caramunich® typ I  | 0.1 kg (3.3%)  | 73 %  | 80   |
| Grain | Karmelowy Czerwony | 0.06 kg (2%)   | 75 %  | 59   |
| Grain | Caraaroma          | 0.06 kg (2%)   | 78 %  | 400  |

## Hops

| Use for | Name              | Amount | Time   | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil    | Marynka           | 13 g   | 60 min | 7.3 %      |
| Boil    | Sybilla           | 10 g   | 60 min | 6.1 %      |
| Boil    | Lublin (Lubelski) | 9 g    | 15 min | 4 %        |

## Yeasts

| Name   | Type  | Form  | Amount | Laboratory |
|--------|-------|-------|--------|------------|
| w34/70 | Lager | Slant | 150 ml | ---        |