

# Kozlak

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- Gravity **20 BLG**
- ABV **8.8 %**
- IBU **22**
- SRM **15.5**
- Style **Traditional Bock**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **28.8 liter(s)**
- Total mash volume **38.4 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**

## Mash step by step

- Heat up **28.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **11.2 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

| Type  | Name                       | Amount        | Yield | EBC |
|-------|----------------------------|---------------|-------|-----|
| Grain | Viking Munich Malt         | 4 kg (41.7%)  | 78 %  | 18  |
| Grain | Optima Karmel 150          | 0.6 kg (6.3%) | 75 %  | 150 |
| Grain | Strzegom Monachijski typ I | 5 kg (52.1%)  | 79 %  | 16  |

## Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Aroma (end of boil) | Lublin (Lubelski) | 50 g   | 5 min  | 4 %        |
| Boil                | Marynka           | 30 g   | 60 min | 8.8 %      |

## Yeasts

| Name | Type  | Form  | Amount | Laboratory |
|------|-------|-------|--------|------------|
| CP18 | Lager | Slant | 400 ml | ---        |