

Kozlak

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **26**
- SRM **19.9**
- 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 **120 min**
- Evaporation rate **10 %/h**
- Boil size **16.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.7 liter(s)**
- Total mash volume **15.6 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **11.7 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **8.8 liter(s)** of **76C** water or to achieve **16.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|-----------------|-------|-----|
| Grain | Monachijski | 2.25 kg (57.7%) | 80 % | 16 |
| Grain | Pilznieński | 1 kg (25.6%) | 81 % | 4 |
| Grain | Viking melanoidynowy | 0.2 kg (5.1%) | 75 % | 60 |
| Grain | Strzegom Karmel 150 | 0.3 kg (7.7%) | 75 % | 150 |
| Grain | Strzegom Karmel 600 | 0.15 kg (3.8%) | 68 % | 601 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | lunga | 17 g | 60 min | 10 % |