

## 40. Koźlak

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **26**
- SRM **18.4**
- Style **Traditional Bock**

### Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **20.7 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **15.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **66C**
- Keep mash **30 min** at **72C**
- Sparge using **9.9 liter(s)** of **76C** water or to achieve **20.2 liter(s)** of wort

### Fermentables

| Type  | Name                       | Amount         | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński        | 2.5 kg (48.3%) | 80 %  | 4   |
| Grain | Strzegom Monachijski typ I | 2 kg (38.6%)   | 79 %  | 16  |
| Grain | Karmelowy Jasny 30EBC      | 0.43 kg (8.3%) | 75 %  | 30  |
| Grain | Carafa                     | 0.25 kg (4.8%) | 70 %  | 664 |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 25 g   | 60 min | 8.5 %      |

### Yeasts

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