

Koźlak

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **31**
- SRM **6.5**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **8 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **29.1 liter(s)**

Mash information

- Mash efficiency **76 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **10 min**

Mash step by step

- Heat up **19.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **77C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|---------------|-------|-----|
| Grain | Pilznieński | 3 kg (46.2%) | 81 % | 4 |
| Grain | Viking Pale Ale malt | 1 kg (15.4%) | 80 % | 5 |
| Grain | Strzegom Wiedeński | 1 kg (15.4%) | 79 % | 10 |
| Grain | Strzegom Monachijski typ I | 0.5 kg (7.7%) | 79 % | 16 |
| Grain | Carahell | 1 kg (15.4%) | 77 % | 26 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| First Wort | Marynka | 30 g | 50 min | 10 % |
| Aroma (end of boil) | Lublin (Lubelski) | 15 g | 15 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------|-------|------|--------|------------------------------------|
| Saflager S-23 | Lager | Dry | 11 g | Fermentis Division of S.I.Lesaffre |