

Kozlak

- 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 | --- |