

Kozlak

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **22**
- SRM **10.6**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.7 liter(s)**
- Total mash volume **27.6 liter(s)**

Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **35 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **20.7 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **35 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|---------------|-------|-----|
| Grain | Strzegom Pilzneński | 4 kg (58%) | 80 % | 4 |
| Grain | Monachijski | 2 kg (29%) | 80 % | 16 |
| Grain | Pszeniczny | 0.3 kg (4.3%) | 85 % | 4 |
| Grain | Strzegom Karmel 150 | 0.3 kg (4.3%) | 75 % | 150 |
| Grain | Caramunich® typ I | 0.3 kg (4.3%) | 73 % | 80 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | Perle | 20 g | 60 min | 5 % |
| Boil | Perle | 20 g | 50 min | 5 % |
| Boil | Perle | 15 g | 20 min | 5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|-------|--------|------------|
| us-05 | Ale | Slant | 500 ml | --- |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------|--------|---------|--------|
| Fining | whirfloc | 0.5 g | Boil | 10 min |