

#77 KOŻLAK

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **26**
- SRM **16.2**
- 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 **73 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **19.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 3.5 kg (54.7%) | 80 % | 4 |
| Grain | Strzegom Monachijski typ II | 2 kg (31.3%) | 79 % | 22 |
| Grain | Melanoiden Malt | 0.2 kg (3.1%) | 80 % | 39 |
| Grain | Caraaroma | 0.4 kg (6.3%) | 78 % | 400 |
| Grain | caramel | 0.3 kg (4.7%) | 78 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | Marynka | 30 g | 60 min | 7.8 % |
| Boil | East Kent Goldings | 15 g | 10 min | 5.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------|-------|-------|--------|------------|
| Saflager W 34/70 | Lager | Slant | 300 ml | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|--------|----------|-----|------|--------|
| Fining | whirfloc | 1 g | Boil | 10 min |
|--------|----------|-----|------|--------|