

Kozlak new

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **23**
- SRM **11.3**

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 **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.5 liter(s)**
- Total mash volume **24.7 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **65 C**, Time **50 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **18.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **50 min** at **65C**
- Keep mash **25 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pilsner malt | 3 kg (48.6%) | 82 % | 4 |
| Grain | Viking Munich Malt | 1.4 kg (22.7%) | 78 % | 18 |
| Grain | Viking Vienna Malt | 0.42 kg (6.8%) | 79 % | 7 |
| Grain | Strzegom Bursztynowy | 0.5 kg (8.1%) | 70 % | 49 |
| Grain | Strzegom Karmel 30 | 0.5 kg (8.1%) | 75 % | 30 |
| Grain | Strzegom Karmel 150 | 0.35 kg (5.7%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Marynka | 20 g | 60 min | 10 % |
| Aroma (end of boil) | Lublin (Lubelski) | 15 g | 10 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------|-------|------|--------|------------|
| s39 Bock, Porter | Lager | Dry | 12.5 g | --- |