

## Kozlak new

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- 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	---