

## pierwsze

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **33**
- SRM **11.9**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.6 liter(s)**
- Total mash volume **26.2 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **19.6 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **62C**
- Keep mash **30 min** at **72C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (45.8%)	80 %	5
Grain	Strzegom Monachijski typ I	3 kg (45.8%)	79 %	16
Grain	Strzegom Karmel 300	0.25 kg (3.8%)	70 %	400
Grain	Barley, Flaked	0.3 kg (4.6%)	70 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	45 g	60 min	6.7 %
Boil	Lublin (Lubelski)	15 g	10 min	6 %
Boil	Lomik	20 g	10 min	5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale