

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **26**
- SRM **5.3**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **33.1 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **15 min** at **63C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **21.1 liter(s)** of **76C** water or to achieve **33.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	3 kg (50%)	82 %	4
Grain	Monachijski	1 kg (16.7%)	80 %	16
Grain	Strzegom Wiedeński	1 kg (16.7%)	79 %	10
Grain	Golden	1 kg (16.7%)	79 %	12

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Lublin (Lubelski)	45 g	70 min	4 %
Boil	Puławski	30 g	10 min	6 %
Boil	Puławski	30 g	5 min	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale