

imp

- Gravity **24.9 BLG**
- ABV **11.6 %**
- IBU **40**
- SRM **36.8**

Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.9 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **21.9 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **23 liter(s)**
- Total mash volume **32.2 liter(s)**

Steps

- Temp **52 C**, Time **5 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **23 liter(s)** of strike water to **58.4C**
- Add grains
- Keep mash **5 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **8.1 liter(s)** of **76C** water or to achieve **21.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	7 kg (76.1%)	80 %	5
Grain	Caraaroma	1 kg (10.9%)	78 %	400
Grain	Carafa II	0.2 kg (2.2%)	70 %	1100
Grain	Płatki owsiane	1 kg (10.9%)	100 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	50 g	0 min	2.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	500 ml	Safale