

Apa

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **48**
- SRM **3.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **33 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.9 liter(s)**
- Total mash volume **32 liter(s)**

Steps

- Temp **65 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **24.9 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **33 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	5 kg (70.4%)	82 %	4
Grain	Pszeniczny	1 kg (14.1%)	85 %	4
Grain	Płatki pszeniczne	0.7 kg (9.9%)	85 %	3
Grain	Rice, Flaked	0.4 kg (5.6%)	70 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Centennial	20 g	90 min	9.7 %
First Wort	Cascade	20 g	90 min	7.1 %
Whirlpool	Centennial	40 g	20 min	9.7 %
Whirlpool	Cascade	40 g	20 min	7.1 %
Dry Hop	Centennial	40 g	5 day(s)	9.7 %
Dry Hop	Cascade	40 g	5 day(s)	7.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew S-33	Ale	Dry	11 g	Safbrew