

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **52**
- SRM **6.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **43 liter(s)**
- Trub loss **5 %**
- Size with trub loss **45.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **55.3 liter(s)**

Mash information

- Mash efficiency **86 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **33.2 liter(s)**
- Total mash volume **44.2 liter(s)**

Steps

- Temp **65 C**, Time **45 min**
- Temp **68 C**, Time **20 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **12 min**

Mash step by step

- Heat up **33.2 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **20 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **12 min** at **76C**
- Sparge using **33.2 liter(s)** of **76C** water or to achieve **55.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	10.06 kg (91%)	82 %	4
Grain	Strzegom Karmel 150	0.5 kg (4.5%)	75 %	150
Grain	Płatki pszeniczne	0.5 kg (4.5%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	50 g	60 min	6 %
Boil	Chinook	20 g	30 min	13 %
Boil	Citra	40 g	15 min	12 %
Boil	Citra	30 g	10 min	12 %
Aroma (end of boil)	Citra	30 g	20 min	12 %
Boil	Sybilla	20 g	10 min	3.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Safale US-05	Ale	Dry	23 g	Fermentis
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