

Robo

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **51**
- SRM **11.8**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **17.4 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **13.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **1 min** at **78C**
- Sparge using **4.5 liter(s)** of **76C** water or to achieve **14.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (77.5%)	80 %	5
Grain	Monachijski	0.7 kg (18.1%)	78 %	16
Grain	Viking malt karmelowy 300	0.17 kg (4.4%)	75 %	300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	10 g	60 min	13.2 %
Boil	Enigma (AUS)	15 g	30 min	15 %
Boil	Simcoe	20 g	0 min	13.2 %
Boil	Enigma (AUS)	20 g	0 min	17.2 %
Dry Hop	Simcoe	20 g	10 day(s)	13.2 %
Dry Hop	Enigma (AUS)	20 g	10 day(s)	15 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	5.25 g	Fermentis