

Inżynierskie

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **29**
- SRM **4.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **18.4 liter(s)**

Steps

- Temp **68 C**, Time **60 min**

Mash step by step

- Heat up **14.3 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	4.1 kg (100%)	85 %	7

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	20 g	60 min	13.2 %
Aroma (end of boil)	Simcoe	15 g	1 min	13.2 %
Whirlpool	Simcoe	15 g	0 min	13.2 %
Dry Hop	Simcoe	30 g	7 day(s)	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis