

warka18 duza

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **27**
- SRM **3.7**
- Style **Classic American Pilsner**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.8 liter(s)**
- Total mash volume **23.8 liter(s)**

Steps

- Temp **63 C**, Time **35 min**
- Temp **72 C**, Time **40 min**

Mash step by step

- Heat up **17.8 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **35 min** at **63C**
- Keep mash **40 min** at **72C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	hook head pilsner	4.5 kg (75.8%)	80.5 %	3.5
Grain	BESTMALZ - Bestt Pale Ale	1 kg (16.8%)	80.5 %	6
Grain	irish wheat	0.25 kg (4.2%)	85 %	5
Grain	Oats, Malted	0.19 kg (3.2%)	80 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Galena	30 g	20 min	13 %
Boil	Magnum	24 g	5 min	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	100 ml	Fermentis