

zecowe2

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **41**
- SRM **7.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.8 liter(s)**
- Total mash volume **31.9 liter(s)**

Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **24.8 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	4.5 kg (63.4%)	81 %	6
Grain	Weyermann - Pilsner Malt	0.5 kg (7%)	81 %	5
Grain	Weyermann - Carapils	0.8 kg (11.3%)	78 %	4
Grain	Aroma CastleMalting	0.5 kg (7%)	78 %	100
Grain	Płatki owsiane	0.5 kg (7%)	60 %	3
Grain	płatki ryżowe	0.3 kg (4.2%)	70 %	1

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	6 g	60 min	12.4 %
Boil	Książęcy	15 g	20 min	7.2 %
Boil	Zula	15 g	20 min	10.6 %
Boil	Książęcy	15 g	5 min	7.2 %
Aroma (end of boil)	Książęcy	25 g	10 min	7.2 %
Aroma (end of boil)	Zula	20 g	10 min	10.6 %

Whirlpool	Książęcy	50 g	15 min	7.2 %
Dry Hop	Książęcy	75 g	4 day(s)	7.2 %
Dry Hop	Zula	55 g	4 day(s)	10.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis