

warka2

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **29**
- SRM **4.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **67 C**, Time **120 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **120 min** at **67C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **22.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale	5 kg (100%)	82.1 %	4.5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	15 g	60 min	14.5 %
Boil	Cascade PL	20 g	15 min	4 %
Aroma (end of boil)	Cascade PL	28 g	0 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew S-33	Ale	Dry	11.5 g	Safbrew