

HH ale

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **43**
- SRM **5.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **28.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.6 liter(s)**
- Total mash volume **21.4 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **16.6 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale optima	4.5 kg (90%)	81.6 %	7
Grain	Weyermann - Caraamber	0.25 kg (5%)	75 %	65
Sugar	cukier	0.25 kg (5%)	100 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	lunga	20 g	60 min	9.5 %
Boil	Citra	25 g	7 min	13.3 %
Boil	Cascade	25 g	7 min	6.9 %
Boil	Mosaic	25 g	7 min	12.4 %
Aroma (end of boil)	Citra	25 g	0 min	1.3 %
Aroma (end of boil)	Cascade	25 g	0 min	6.9 %
Aroma (end of boil)	Mosaic	25 g	0 min	12.4 %
Dry Hop	Cascade	25 g	3 day(s)	6.9 %
Dry Hop	Mosaic	25 g	3 day(s)	12.4 %