

# Cascade pale ale w3

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **72**
- SRM **5.7**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **9 liter(s)**
- Trub loss **5 %**
- Size with trub loss **9.4 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **11.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.7 liter(s)**
- Total mash volume **10.3 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **67 C**, Time **70 min**
- Temp **74 C**, Time **12 min**

## Mash step by step

- Heat up **7.7 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **70 min** at **67C**
- Keep mash **12 min** at **74C**
- Sparge using **6.5 liter(s)** of **76C** water or to achieve **11.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.8 kg (69.9%)	80 %	5
Grain	Pilznieński	0.72 kg (28%)	81 %	4
Grain	Strzegom Karmel 150	0.05 kg (2.1%)	75 %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Cascade PL	18 g	60 min	8 %
Boil	Cascade PL	18 g	30 min	8 %
Aroma (end of boil)	Citra	18 g	5 min	13 %
Dry Hop	Lublin (Lubelski)	18 g	---	14 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	3.6 g	Fermentis