

# Ensamble

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **85**
- SRM **5.2**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **27 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **63 C**, Time **70 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **20 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **70 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **20 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **27 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	5 kg (83.3%)	85 %	7
Grain	Pszeniczny	1 kg (16.7%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	40 g	60 min	15 %
Boil	Cascade pl	15 g	40 min	7.1 %
Boil	Simcoe	5 g	40 min	11.7 %
Boil	Citra	5 g	40 min	11.7 %
Boil	Cascade PL	45 g	5 min	7.1 %
Boil	Simcoe	15 g	5 min	11.7 %
Boil	Citra	15 g	5 min	11.7 %
Dry Hop	Cascade PL	40 g	7 day(s)	7.1 %
Dry Hop	Simcoe	30 g	7 day(s)	11.7 %
Dry Hop	Citra	30 g	7 day(s)	11.7 %

## Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
Safale US-05	Ale	Dry	12 g	Fermentis