

# HOP ATTACK VARIATIONS

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- Gravity **10 BLG**
- ABV **4 %**
- IBU **79**
- SRM **3.9**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **35.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **2 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **23.1 liter(s)** of **76C** water or to achieve **35.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	5 kg (100%)	85 %	6.5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	20 g	60 min	11.3 %
Boil	Centennial	40 g	20 min	11.3 %
Boil	Citra	60 g	10 min	17.5 %
Aroma (end of boil)	Citra	30 g	0 min	17.5 %

## Yeasts

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

## Notes

- Przez problem z filtracją wyszło tylko 10 litrów. Za butelkowane 06.03. 2021.  
Blg Początkowe 13 końcowe 2.5.  
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