

# Warka 3 a'la APA

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- Gravity **13.8 BLG**
- ABV ---
- IBU **38**
- SRM **10**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **2.8 liter(s)**
- Total mash volume **3.6 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**

## Mash step by step

- Heat up **2.8 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **14.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Liquid Extract	Bruntal Pale Ale	1.7 kg (68%)	80 %	35
Grain	Weyermann - Carapils	0.4 kg (16%)	78 %	4
Grain	Viking Pilsner malt	0.4 kg (16%)	82 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	16.8 %
Boil	Citra	7 g	7 min	12.4 %
Boil	Cascade	7 g	7 min	8.3 %
Dry Hop	Citra	10 g	5 day(s)	12.4 %
Dry Hop	Cascade	10 g	5 day(s)	8.3 %

## Yeasts

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