

# APA German Cascade

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **33**
- SRM **4.1**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **13 %/h**
- Boil size **26.7 liter(s)**

## Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **17.2 liter(s)**

## Steps

- Temp **68 C**, Time **90 min**
- Temp **75.6 C**, Time **5 min**

## Mash step by step

- Heat up **12.9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **5 min** at **75.6C**
- Sparge using **18.1 liter(s)** of **76C** water or to achieve **26.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (93%)	80 %	5
Grain	Strzegom Karmel 30	0.15 kg (3.5%)	75 %	30
Grain	Strzegom Monachijski typ I	0.15 kg (3.5%)	79 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Marynka	20 g	60 min	9.5 %
Boil	Cascade DE	20 g	30 min	4.9 %
Boil	Cascade DE	30 g	5 min	4.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
B5 American West	Ale	Dry	10 g	Bulldog