

# BeeFree APA

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- Gravity **5.3 BLG**
- ABV **2 %**
- IBU **32**
- SRM **3.9**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **3.2 liter(s)**
- Total mash volume **4.2 liter(s)**

## Steps

- Temp **68 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

## Mash step by step

- Heat up **3.2 liter(s)** of strike water to **75.9C**
- Add grains
- Keep mash **40 min** at **68C**
- Keep mash **20 min** at **72C**
- Sparge using **10.6 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	0.9 kg (85.7%)	80 %	5
Grain	Karmelowy Czerwony	0.15 kg (14.3%)	75 %	59

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Polaris	3 g	60 min	21.1 %
Boil	Polaris	2 g	30 min	21.1 %
Boil	Polaris	2 g	10 min	21.1 %