

# APA Karmel

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **16**
- SRM **4.8**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **19.4 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (90.9%)	80 %	5
Grain	Karmelowy Jasny 30EBC	0.5 kg (9.1%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	11.5 %
Dry Hop	Lublin (Lubelski)	15 g	7 day(s)	4.8 %