

# Karmelowe Ale

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **21**
- SRM **7.6**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25 liter(s)**

## Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **20 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (60%)	80 %	5
Grain	Karmelowy Jasny 30EBC	2 kg (40%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	izabella	50 g	30 min	5.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	10.5 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Finning	mech irlandzki	5 g	Boil	15 min