

# Karmel Stout

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- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **28**
- SRM **53.9**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.7 liter(s)**
- Total mash volume **15.6 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**

## Mash step by step

- Heat up **11.7 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **7.4 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Karmel 300	1 kg (25.6%)	70 %	299
Grain	Bestmalz Red Active	2 kg (51.3%)	79 %	30
Grain	Chocolate Rye optima	0.2 kg (5.1%)	20 %	1300
Grain	Jęczmień palony	0.2 kg (5.1%)	55 %	985
Grain	Barley, Flaked	0.5 kg (12.8%)	70 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	15 g	60 min	11 %