

# Bitter

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- Gravity **9.5 BLG**
- ABV ---
- IBU **27**
- SRM **6.4**
- Style **Standard/Ordinary Bitter**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.4 liter(s)**
- Total mash volume **15.2 liter(s)**

## Steps

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

## Mash step by step

- Heat up **11.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3.5 kg (92.1%)	79 %	6
Grain	Colorado Crystal 25EBC	0.2 kg (5.3%)	79 %	25
Grain	Strzegom Karmel 300	0.1 kg (2.6%)	70 %	299

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	20 g	60 min	9 %
Aroma (end of boil)	First Gold	25 g	5 min	8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM11 Wichrowe Wzgórza	Ale	Slant	75 ml	Fermentum Mobile