

# Bitter

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- Gravity **9 BLG**
- ABV **3.5 %**
- IBU **33**
- SRM **6.2**
- Style **Standard/Ordinary Bitter**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **33.1 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **66 C**, Time **75 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **75 min** at **66C**
- Keep mash **15 min** at **78C**
- Sparge using **19.6 liter(s)** of **76C** water or to achieve **33.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Warminster - Pale malt	3.2 kg (71.1%)	81 %	4.5
Grain	Warminster - English Caramalt	0.8 kg (17.8%)	75 %	64.6
Grain	Corn, Flaked	0.25 kg (5.6%)	80 %	0.93
Grain	Barley, Flaked	0.25 kg (5.6%)	70 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	35 g	75 min	8.2 %
Aroma (end of boil)	Progress	30 g	5 min	5.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale