

# Bitter

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- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **36**
- SRM **7.5**
- Style **Standard/Ordinary Bitter**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.4 liter(s)**

## Mash information

- Mash efficiency **71.5 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **17.7 liter(s)**

## Steps

- Temp **68 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **13.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **45 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **25.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	4 kg (90.5%)	80 %	7
Grain	Caramel/Crystal Malt - 10L	0.3 kg (6.8%)	75 %	20
Grain	Special B Malt	0.12 kg (2.7%)	65.2 %	315

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	40 g	60 min	5.1 %
Aroma (end of boil)	East Kent Goldings	20 g	20 min	5.1 %
Aroma (end of boil)	East Kent Goldings	40 g	5 min	5.1 %