

## Bitter

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **30**
- SRM **7.1**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **90 min**
- Evaporation rate **22 %/h**
- Boil size **17.6 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **11 liter(s)**
- Total mash volume **13.8 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **11 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **2 min** at **78C**
- Sparge using **9.4 liter(s)** of **76C** water or to achieve **17.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	1.46 kg (52.9%)	81 %	6
Grain	Caramel/Crystal Malt - 10L	0.1 kg (3.6%)	75 %	160
Grain	Abbey Castle	0.1 kg (3.6%)	80 %	45
Grain	Briess - Pale Ale Malt	1.1 kg (39.9%)	80 %	7

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	20 g	60 min	4.6 %
Boil	Fuggles	15 g	10 min	6 %
Boil	East Kent Goldings	15 g	10 min	4.6 %
Boil	Talus	10 g	1 min	6.7 %

### Yeasts

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

### Extras

Type	Name	Amount	Use for	Time
Fining	WhirlflocT	3 g	Boil	15 min
Water Agent	Kwas mlekowy	2 g	Mash	15 min
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