

## #037 Bitter

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **25**
- SRM **10.6**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **8 %**
- Size with trub loss **24.8 liter(s)**
- Boil time **65 min**
- Evaporation rate **11 %/h**
- Boil size **31.9 liter(s)**

### Mash information

- Mash efficiency **79 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **22.6 liter(s)**
- Total mash volume **28.2 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **22.6 liter(s)** of strike water to **70.6C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **31.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	5 kg (88.5%)	81 %	6
Grain	Fawcett - Crystal	0.3 kg (5.3%)	70 %	160
Grain	Weyermann Caramunich 3	0.25 kg (4.4%)	76 %	150
Grain	Special B Malt	0.1 kg (1.8%)	65.2 %	350

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	25 g	60 min	6.1 %
Boil	Hallertau Spalt Select	35 g	10 min	5.5 %
Aroma (end of boil)	Challenger	25 g	5 min	6.1 %
Aroma (end of boil)	Hallertau Spalt Select	20 g	5 min	5.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast 1469 West Yorkshire Ale	Ale	Liquid	1000 ml	Wyeast Labs

## Extras

Type	Name	Amount	Use for	Time
Fining	whirfloc t	1.25 g	Boil	10 min