

## Bitter v45L v.2

---

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **30**
- SRM **7.7**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **10 %**
- Size with trub loss **46 liter(s)**
- Boil time **65 min**
- Evaporation rate **15 %/h**
- Boil size **55.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **28.4 liter(s)**
- Total mash volume **37.8 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **28.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **36.9 liter(s)** of **76C** water or to achieve **55.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	9 kg (95.2%)	80 %	5
Grain	Aroma - Brewferm	0.4 kg (4.2%)	78 %	150
Grain	Jęczmień palony	0.05 kg (0.5%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Kent Goldings	90 g	60 min	5.1 %
Boil	East Kent Goldings	50 g	10 min	5.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	---
Mangrove Jack's M07 British Ale	Ale	Dry	10 g	---