

# Bitter

- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **34**
- SRM **11.9**
- Style **Standard/Ordinary Bitter**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **11.3 liter(s)**
- Total mash volume **15.8 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **11.3 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **24.9 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.8 kg (84.4%)	80 %	5
Grain	Caramel/Crystal Malt - 120L	0.4 kg (8.9%)	72 %	236
Grain	Special B Malt	0.2 kg (4.4%)	65.2 %	350
Grain	Weyermann - Acidulated Malt	0.1 kg (2.2%)	80 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	35 g	60 min	5.6 %
Boil	Fuggles	35 g	30 min	5.6 %
Boil	Fuggles	10 g	5 min	5.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	100 ml	Safale

## Extras

Type	Name	Amount	Use for	Time
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Fining	mech	5 g	Boil	15 min
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