

Bitter No. 1

- Gravity **9.5 BLG**
- ABV **3.7 %**
- IBU **44**
- SRM **5.2**
- Style **Standard/Ordinary Bitter**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.3 liter(s)**
- Total mash volume **15.8 liter(s)**

Steps

- Temp **69 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **12.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **90 min** at **69C**
- Keep mash **5 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.2 kg (91.4%)	80 %	5
Grain	Caramel/Crystal Malt - 40L	0.3 kg (8.6%)	74 %	79

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	45 g	60 min	5.8 %
Boil	Fuggles	25 g	25 min	4.5 %
Boil	Fuggles	20 g	5 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	---