

Bitter nr 1

- Gravity **10 BLG**
- ABV **4 %**
- IBU **31**
- SRM **8.1**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **26.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **13.4 liter(s)**
- Total mash volume **17.6 liter(s)**

Steps

- Temp **68 C**, Time **90 min**

Mash step by step

- Heat up **13.4 liter(s)** of strike water to **75.5C**
- Add grains
- Keep mash **90 min** at **68C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **26.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2 kg (47.6%)	80 %	7
Grain	Simpsons - Maris Otter	1 kg (23.8%)	81 %	3
Grain	Fawcett pale caramalt	0.4 kg (9.5%)	72 %	15
Grain	Fawcett Crystal Rye	0.3 kg (7.1%)	72 %	200
Grain	Simpsons - Golden Promise	0.5 kg (11.9%)	81 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	25 g	60 min	8 %
Aroma (end of boil)	East Kent Goldings	15 g	20 min	7.5 %
Aroma (end of boil)	East Kent Goldings	10 g	0 min	7.5 %
Dry Hop	East Kent Goldings	10 g	5 day(s)	7.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Slant	150 ml	Danstar