

Bitter

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **36**
- SRM **7.5**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

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

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.5 kg (90%)	80 %	5
Grain	Biscuit Malt	0.25 kg (5%)	79 %	45
Grain	crystal 1	0.25 kg (5%)	78 %	160

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	30 g	60 min	11 %
Aroma (end of boil)	East Kent Goldings	50 g	0 min	5.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - 1728 Scottish Ale	Ale	Liquid	1000 ml	Wyeast Labs