

# 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                | Iunga              | 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<br>Scottish Ale | Ale  | Liquid | 1000 ml | Wyeast Labs |