

Bitter

- Gravity **9.8 BLG**
- ABV **3.8 %**
- IBU **33**
- SRM **7.4**
- Style **Standard/Ordinary Bitter**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **10 %**
- Size with trub loss **20.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.8 liter(s)**
- Total mash volume **16.4 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **12.8 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **1 min** at **78C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **24.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------|----------------|--------|-----|
| Grain | Maris Otter Crisp | 3.5 kg (95.9%) | 83 % | 6 |
| Grain | Special B Malt | 0.15 kg (4.1%) | 65.2 % | 315 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | Challenger | 35 g | 60 min | 7 % |
| Boil | East Kent Goldings | 25 g | 3 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------------------|------|--------|---------|-------------|
| Wyeast - London Ale III | Ale | Liquid | 1000 ml | Wyeast Labs |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|--------|---------|--------|
| Fining | Whirlfloc | 1 g | Boil | 10 min |
| Water Agent | Chlorek wapnia | 1 g | Mash | 60 min |
| Water Agent | Gips Piwowarski | 2 g | Mash | 60 min |