

Bitter v45L v.2

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **30**
- SRM **7.7**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **10 %**
- Size with trub loss **46 liter(s)**
- Boil time **65 min**
- Evaporation rate **15 %/h**
- Boil size **55.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **28.4 liter(s)**
- Total mash volume **37.8 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **28.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **36.9 liter(s)** of **76C** water or to achieve **55.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 9 kg (95.2%) | 80 % | 5 |
| Grain | Aroma - Brewferm | 0.4 kg (4.2%) | 78 % | 150 |
| Grain | Jęczmień palony | 0.05 kg (0.5%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | Kent Goldings | 90 g | 60 min | 5.1 % |
| Boil | East Kent Goldings | 50 g | 10 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11.5 g | --- |
| Mangrove Jack's M07 British Ale | Ale | Dry | 10 g | --- |