

Bitter

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **33**
- SRM **9.9**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **13 %/h**
- Boil size **15.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.5 liter(s)**
- Total mash volume **12.2 liter(s)**

Steps

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

Mash step by step

- Heat up **9.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **8.8 liter(s)** of **76C** water or to achieve **15.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|----------------|-------|-----|
| Grain | Briess - Pale Ale Malt | 2 kg (74.1%) | 80 % | 7 |
| Grain | Fawcett - Crystal | 0.25 kg (9.3%) | 70 % | 160 |
| Grain | Biscuit Malt | 0.25 kg (9.3%) | 79 % | 45 |
| Grain | Pszeniczny | 0.2 kg (7.4%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | lunga | 7 g | 60 min | 11 % |
| Boil | Equinox | 13 g | 10 min | 13.5 % |
| Boil | East Kent Goldings | 15 g | 5 min | 4.5 % |
| Boil | Northdown | 10 g | 5 min | 8.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------|------|--------|--------|------------|
| WLP023 - Burton Ale Yeast | Ale | Liquid | 30 ml | White Labs |