

#42 Bitter

- Gravity **9.3 BLG**
- ABV **3.6 %**
- IBU **45**
- SRM **8.8**
- Style **Standard/Ordinary Bitter**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **14 %/h**
- Boil size **27.1 liter(s)**

Mash information

- Mash efficiency **84 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **15.4 liter(s)**

Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **79 C**, Time **1 min**

Mash step by step

- Heat up **12 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **79C**
- Sparge using **18.5 liter(s)** of **76C** water or to achieve **27.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------------|-----------------|-------|------|
| Grain | Maris Otter Crisp | 3.15 kg (92%) | 80 % | 6.5 |
| Grain | Crystal Light | 0.17 kg (5%) | 72 % | 110 |
| Grain | Caramel/Crystal Malt - 120L | 0.08 kg (2.3%) | 72 % | 270 |
| Grain | Weyermann - Dehusked Carafa III | 0.025 kg (0.7%) | 1 % | 1400 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|--------------------|--------|--------|------------|
| Boil | Iunga | 25 g | 60 min | 11 % |
| Boil | East Kent Goldings | 30 g | 10 min | 4.5 % |
| Boil | Fuggles | 30 g | 10 min | 4.2 % |
| Whirlpool | Fuggles | 20 g | 1 min | 4.5 % |
| Whirlpool | East Kent Goldings | 20 g | 1 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

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|-------------------------------|-----|-------|-------|------------|
| WLP002 - English Ale Yeast | Ale | Slant | 80 ml | White Labs |
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