

#9 Bitter

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **37**
- SRM **9.2**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- 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 **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **70 C**, Time **75 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **75 min** at **70C**
- Keep mash **5 min** at **78C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|--------------|-------|-----|
| Grain | Simpsons - Maris Otter | 4.5 kg (90%) | 81 % | 6 |
| Grain | Cara Crystal Castle Malting | 0.5 kg (10%) | 73 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil | Challenger | 20 g | 60 min | 7 % |
| Boil | Challenger | 30 g | 30 min | 7 % |
| Aroma (end of boil) | Fusion UK | 15 g | 15 min | 4.57 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------|------|------|--------|------------|
| Danstar - Windsor Ale | Ale | Dry | 11.5 g | Danstar |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------|--------|---------|--------|
| Fining | Whirflock | 0.5 g | Boil | 15 min |