

11A. ORDINARY BITTER

- Gravity **9.5 BLG**
- ABV **3.7 %**
- IBU **32**
- SRM **6.2**
- Style **Standard/Ordinary Bitter**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **10 %**
- Size with trub loss **19.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4.42 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **20.9 liter(s)**

Steps

- Temp **66.5 C**, Time **60 min**

Mash step by step

- Heat up **17 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **60 min** at **66.5C**
- Sparge using **10.7 liter(s)** of **76C** water or to achieve **23.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|----------------|-------|-----|
| Grain | Simpsons - Maris Otter | 3 kg (77.9%) | 81 % | 6 |
| Grain | Karmelowy Czerwony | 0.35 kg (9.1%) | 75 % | 59 |
| Grain | Barley, Flaked | 0.3 kg (7.8%) | 70 % | 4 |
| Grain | Biscuit Malt | 0.2 kg (5.2%) | 79 % | 45 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | Fuggles | 30 g | 60 min | 4.5 % |
| Aroma (end of boil) | Fuggles | 30 g | 15 min | 4.5 % |
| Whirlpool | Fuggles | 40 g | 15 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 10 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------|--------|---------|--------|
| Water Agent | CaSO4 | 2 g | Boil | 60 min |
| Water Agent | CaCl2 | 1 g | Boil | 60 min |