

# Tire-Bitter

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **32**
- SRM **7.3**
- Style **Special/Best/Premium Bitter**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **80 min**
- Evaporation rate **12 %/h**
- Boil size **29.2 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **6 liter(s) / kg**
- Mash size **29.6 liter(s)**
- Total mash volume **34.5 liter(s)**

## Steps

- Temp **20 C**, Time **0 min**
- Temp **65 C**, Time **90 min**
- Temp **71.5 C**, Time **10 min**
- Temp **77 C**, Time **10 min**

## Mash step by step

- Heat up **29.6 liter(s)** of strike water to **20C**
- Add grains
- Keep mash **0 min** at **20C**
- Keep mash **90 min** at **65C**
- Keep mash **10 min** at **71.5C**
- Keep mash **10 min** at **77C**
- Sparge using **4.5 liter(s)** of **76C** water or to achieve **29.2 liter(s)** of wort

## Fermentables

| Type  | Name                            | Amount         | Yield | EBC  |
|-------|---------------------------------|----------------|-------|------|
| Grain | Simpsons - Maris Otter          | 4.6 kg (93.3%) | 81 %  | 6    |
| Grain | Biscuit Malt                    | 0.15 kg (3%)   | 79 %  | 50   |
| Grain | Aromatic Malt                   | 0.15 kg (3%)   | 78 %  | 51   |
| Grain | Weyermann - Dehusked Carafo III | 0.03 kg (0.6%) | 70 %  | 1024 |

## Hops

| Use for             | Name               | Amount | Time   | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| First Wort          | Sybilla            | 12 g   | 80 min | 7 %        |
| Boil                | Fuggles            | 15 g   | 60 min | 5.9 %      |
| Boil                | Fuggles            | 15 g   | 30 min | 5.6 %      |
| Boil                | East Kent Goldings | 15 g   | 15 min | 5.4 %      |
| Aroma (end of boil) | East Kent Goldings | 15 g   | 5 min  | 5.4 %      |

## Yeasts

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

|                            |     |        |        |                  |
|----------------------------|-----|--------|--------|------------------|
| FM10 O czym szumią wierzby | Ale | Liquid | 100 ml | Fermentum Mobile |
|----------------------------|-----|--------|--------|------------------|

### Extras

| Type   | Name      | Amount | Use for | Time   |
|--------|-----------|--------|---------|--------|
| Fining | Whirlfloc | 3 g    | Boil    | 20 min |