

## English brown ale

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **23**
- SRM **19.6**
- Style **Northern English Brown Ale**

### 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 **10 %/h**
- Boil size **15.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.7 liter(s)**
- Total mash volume **11.6 liter(s)**

### Steps

- Temp **68 C**, Time **30 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **8.7 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **30 min** at **68C**
- Keep mash **50 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **9.4 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

| Type  | Name                           | Amount         | Yield | EBC  |
|-------|--------------------------------|----------------|-------|------|
| Grain | Simpsons - Maris Otter         | 2.3 kg (79.3%) | 81 %  | 6    |
| Grain | Płatki owsiane                 | 0.2 kg (6.9%)  | 85 %  | 3    |
| Grain | Czekoladowy                    | 0.1 kg (3.4%)  | 60 %  | 1200 |
| Grain | Caramel/Crystal Malt - 120L    | 0.15 kg (5.2%) | 72 %  | 160  |
| Grain | Brown Malt (British Chocolate) | 0.15 kg (5.2%) | 70 %  | 175  |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Golding | 10 g   | 60 min | 6.2 %      |
| Boil    | Golding | 20 g   | 15 min | 6.2 %      |

### Yeasts

| Name                       | Type | Form   | Amount | Laboratory |
|----------------------------|------|--------|--------|------------|
| WLP002 - English Ale Yeast | Ale  | Liquid | 20 ml  | White Labs |