

English brown ale

- 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 |