

# English Brown Porter

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **32**
- SRM **20.9**
- Style **Brown Porter**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.2 liter(s)**

## Mash information

- Mash efficiency **81 %**
- Liquor-to-grist ratio **3.1 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18.5 liter(s)**

## Steps

- Temp **66 C**, Time **70 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **14 liter(s)** of strike water to **73.4C**
- Add grains
- Keep mash **70 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **24.2 liter(s)** of wort

## Fermentables

| Type  | Name                           | Amount         | Yield | EBC |
|-------|--------------------------------|----------------|-------|-----|
| Grain | Pale Ale Pearl                 | 3.5 kg (77.8%) | 79 %  | 6   |
| Grain | Red Crystal                    | 0.4 kg (8.9%)  | 74 %  | 400 |
| Grain | Brown Malt (British Chocolate) | 0.5 kg (11.1%) | 70 %  | 180 |
| Grain | Chocolate Malt (UK)            | 0.1 kg (2.2%)  | 73 %  | 530 |

Na ostatnie 10min pierwszej przerwy

## Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Fuggles | 55 g   | 60 min | 4.5 %      |
| Boil    | Fuggles | 20 g   | 10 min | 4.5 %      |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Safale     |