

# Brown Porter

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **24**
- SRM **23.4**
- 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 **25.3 liter(s)**

## Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.8 liter(s)**
- Total mash volume **25 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **45 min**
- Temp **77 C**, Time **1 min**

## Mash step by step

- Heat up **18.8 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type    | Name                             | Amount         | Yield | EBC  |
|---------|----------------------------------|----------------|-------|------|
| Grain   | Pale Ale - Strzegom              | 4 kg (64%)     | 70 %  | 6    |
| Grain   | Brown Crisp - UK                 | 1 kg (16%)     | 70 %  | 135  |
| Grain   | Karmelowy Pale<br>Cara 9 - UK    | 0.5 kg (8%)    | 70 %  | 9    |
| Grain   | Karmelowy Jasny 30<br>- Strzegom | 0.5 kg (8%)    | 70 %  | 30   |
| Grain   | Czekoladowy 400 -<br>Strzegom    | 0.1 kg (1.6%)  | 68 %  | 400  |
| Grain   | Carafa III -<br>Weyermann        | 0.15 kg (2.4%) | 70 %  | 1200 |
| Adjunct | Kranówa                          | 0 kg           | --- % | ---  |

## Hops

| Use for | Name                            | Amount | Time   | Alpha acid |
|---------|---------------------------------|--------|--------|------------|
| Boil    | Cascade - USA                   | 10 g   | 60 min | 7.1 %      |
| Boil    | Hallertau Tradition -<br>Niemcy | 10 g   | 60 min | 5.4 %      |
| Boil    | Cascade - USA                   | 20 g   | 10 min | 7.1 %      |

|      |                                 |      |        |       |
|------|---------------------------------|------|--------|-------|
| Boil | Hallertau Tradition -<br>Niemcy | 20 g | 10 min | 5.4 % |
|------|---------------------------------|------|--------|-------|

### Yeasts

| Name        | Type | Form  | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-04 | Ale  | Slant | 300 ml | Safale     |