

## Brown Porter

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **21**
- SRM **23.4**
- Style **Brown Porter**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **28.8 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **23.2 liter(s)**

### Steps

- Temp **66 C**, Time **35 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **18 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **35 min** at **66C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (77.7%)	80 %	6.2
Grain	Brown Malt (British Chocolate)	0.4 kg (7.8%)	70 %	187
Grain	Weyermann - Caramel Rye Malt	0.2 kg (3.9%)	74 %	175
Grain	Briess - Dark Chocolate Malt	0.25 kg (4.9%)	60 %	1200
Grain	Oats, Flaked	0.3 kg (5.8%)	80 %	2

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	30 g	60 min	4.5 %
Boil	Fuggles	20 g	30 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	250 ml	Fermentis