

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