

Brown Porter

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **22**
- SRM **21.3**
- 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 **5 %/h**
- Boil size **24.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15.6 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Vienna Malt	2.5 kg (48.1%)	79 %	7
Grain	Viking Pilsner malt	2 kg (38.5%)	82 %	4
Grain	Strzegom Karmel 600	0.1 kg (1.9%)	70 %	299
Grain	Brown Malt (British Chocolate)	0.4 kg (7.7%)	70 %	128
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.8%)	68 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	15 g	60 min	11 %
Boil	Fuggles	15 g	15 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM11 Wichrowe Wzgórza	Ale	Slant	150 ml	Fermentum Mobile