

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 Cara 9 - UK	0.5 kg (8%)	70 %	9
Grain	Karmelowy Jasny 30 - Strzegom	0.5 kg (8%)	70 %	30
Grain	Czekoladowy 400 - Strzegom	0.1 kg (1.6%)	68 %	400
Grain	Carafa III - 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 - Niemcy	10 g	60 min	5.4 %
Boil	Cascade - USA	20 g	10 min	7.1 %

Boil	Hallertau Tradition - Niemcy	20 g	10 min	5.4 %
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Yeasts

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