

porter

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **27**
- SRM **22.1**
- 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 **67 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

Steps

- Temp **67 C**, Time **70 min**

Mash step by step

- Heat up **18.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **70 min** at **67C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Flagon	4 kg (74.2%)	80 %	5
Grain	Pszeniczny	0.2 kg (3.7%)	85 %	4
Grain	Karmelowy Czerwony	0.27 kg (5%)	75 %	59
Grain	Karmelowy Jasny 30EBC	0.05 kg (0.9%)	75 %	30
Grain	Czekoladowy	0.17 kg (3.2%)	60 %	788
Grain	Simpsons - Crystal Rye	0.2 kg (3.7%)	73 %	177
Grain	Special B Malt	0.5 kg (9.3%)	65.2 %	315

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	30 g	60 min	7 %
Aroma (end of boil)	Challenger	10 g	10 min	7 %
Aroma (end of boil)	Challenger	10 g	0 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale