

## #30 - Porter

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- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **31**
- SRM **23.1**
- Style **Robust 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 **12 %/h**
- Boil size **26.9 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **22 liter(s)**
- Total mash volume **27.5 liter(s)**

### Steps

- Temp **66 C**, Time **120 min**

### Mash step by step

- Heat up **22 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **120 min** at **66C**
- Sparge using **10.4 liter(s)** of **76C** water or to achieve **26.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	3.8 kg (69.1%)	80 %	7
Grain	Pszeniczny	0.5 kg (9.1%)	85 %	4
Grain	Weyermann - Carapils	0.4 kg (7.3%)	78 %	4
Grain	Caramel/Crystal Malt - 80L	0.4 kg (7.3%)	74 %	158
Grain	Czekoladowy	0.4 kg (7.3%)	60 %	788

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	20 g	60 min	11 %
Boil	Cascade	14 g	30 min	6 %
Boil	Tettnang	28 g	5 min	4 %