

# Porter Angielski

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- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **26**
- SRM **15.5**
- Style **Brown Porter**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **3 %**
- Size with trub loss **20.6 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **25 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **14.8 liter(s)**
- Total mash volume **18.8 liter(s)**

## Steps

- Temp **68 C**, Time **55 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **14.8 liter(s)** of strike water to **74.5C**
- Add grains
- Keep mash **55 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **25 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	3.6 kg (90%)	85 %	7
Grain	Caraaroma	0.3 kg (7.5%)	78 %	400
Grain	Weyermann - Carafa I	0.1 kg (2.5%)	70 %	690

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Pioneer	20 g	60 min	8.8 %
Boil	Pioneer	10 g	15 min	8.8 %
Aroma (end of boil)	Willamette	30 g	0 min	5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale