

# Porter Angielski

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **22**
- SRM **26**
- Style **Brown Porter**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.8 liter(s)**
- Total mash volume **16.4 liter(s)**

## Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **12.8 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Sparge using **6.1 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale (W)	3 kg (82.2%)	85 %	7
Grain	Brown (Fawcett)	0.3 kg (8.2%)	72 %	180
Grain	Crystal Medium (Crisp)	0.2 kg (5.5%)	72 %	270
Grain	Chocolate Wheat (W)	0.15 kg (4.1%)	74 %	1000

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	challanger 2020	20 g	30 min	6.1 %
Boil	challanger 2020	20 g	5 min	6.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - 1728 Scottish Ale	Ale	Slant	200 ml	Wyeast Labs

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	1 g	Mash	60 min

Water Agent	chlorek wapnia	1 g	Mash	60 min
Water Agent	kreda	3.5 g	Mash	60 min
Water Agent	sól kuchenna	1 g	Mash	60 min
Fining	whirflock	1 g	Boil	5 min