

# Porter Stout

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **21**
- SRM **30**
- Style **Brown Porter**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

## Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **28 liter(s)**
- Total mash volume **35 liter(s)**

## Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **28 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **6.7 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Maris Otter Crisp	4.6 kg (65.7%)	83 %	6
Grain	Fawcett - Brown	0.5 kg (7.1%)	72 %	180
Grain	Fawcett - Dark Crystal	0.7 kg (10%)	71 %	300
Grain	Fawcett - Pale Chocolate	0.5 kg (7.1%)	71 %	600
Grain	płatki jęczmienne	0.7 kg (10%)	60 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Golding	40 g	50 min	5 %
Boil	Golding	10 g	10 min	5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis