

# 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  |