

# Stout

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **21**
- SRM **39**
- Style **Foreign Extra Stout**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25.4 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **20 min**

## Mash step by step

- Heat up **20 liter(s)** of strike water to **73.3C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **20 min** at **77C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

| Type  | Name                    | Amount         | Yield | EBC  |
|-------|-------------------------|----------------|-------|------|
| Grain | Castle Pale Ale         | 4 kg (74.1%)   | 80 %  | 8    |
| Grain | Briess - Chocolate Malt | 0.2 kg (3.7%)  | 60 %  | 690  |
| Grain | Extra black             | 0.3 kg (5.6%)  | 65 %  | 1400 |
| Grain | Jęczmień palony         | 0.3 kg (5.6%)  | 55 %  | 985  |
| Grain | Pszoniczny              | 0.6 kg (11.1%) | 85 %  | 4    |

## Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Chinook | 15 g   | 60 min | 11.6 %     |
| Aroma (end of boil) | Chinook | 13 g   | 5 min  | 11.6 %     |