

# stout

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- Gravity **17.5 BLG**
- ABV **7.5 %**
- IBU **27**
- SRM **46.1**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **26.8 liter(s)**

## Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **20.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg (37.3%)	80 %	5
Grain	Viking Pilsner malt	2.5 kg (37.3%)	82 %	4
Grain	Fawcett - Pszeniczny Czekoladowy	1 kg (14.9%)	73 %	1001
Grain	Strzegom Karmel 300	0.2 kg (3%)	70 %	299
Grain	Płatki owsiane	0.5 kg (7.5%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M36	Ale	Slant	100 ml	---