

# Stout

- Gravity **18.4 BLG**
- ABV **8 %**
- IBU **37**
- SRM **30.4**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

## Mash information

- Mash efficiency **73 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.7 liter(s)**
- Total mash volume **27.6 liter(s)**

## Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **20.7 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (65.4%)	79 %	6
Grain	Weyermann - Chocolate Wheat	0.1 kg (1.3%)	40 %	1100
Adjunct	Płatki owsiane	0.25 kg (3.3%)	85 %	3
Grain	Weyermann - Carafa I	0.1 kg (1.3%)	40 %	900
Grain	Jęczmień palony	0.2 kg (2.6%)	15 %	1450
Grain	Weyermann Caramunich 3	0.2 kg (2.6%)	76 %	150
Grain	Cara Ruby Castle	0.3 kg (3.9%)	72 %	49
Grain	Monachijski typ II 20-25 EBC Weyermann	1 kg (13.1%)	80 %	20
Sugar	Laktoza	0.5 kg (6.5%)	--- %	0

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zeus	20 g	60 min	14.5 %
Boil	East Kent Goldings	30 g	15 min	5.1 %

Whirlpool	Oktawia	30 g	15 min	8 %
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### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M15 Empire Ale	Ale	Slant	100 ml	Mangrove Jack's

### Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc	3 g	Boil	5 min