

# Stout

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **35**
- SRM **34.1**
- Style **Dry Stout**

## 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 **24.2 liter(s)**

## Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **3.65 liter(s) / kg**
- Mash size **25 liter(s)**
- Total mash volume **31.9 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **25 liter(s)** of strike water to **74.6C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **6.1 liter(s)** of **76C** water or to achieve **24.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (73%)	80 %	5
Grain	Pszeniczny Czekoladowy	0.2 kg (2.9%)	73 %	1001
Grain	Strzegom Karmel 300	0.2 kg (2.9%)	70 %	299
Grain	Weyermann - Carafa I	0.25 kg (3.6%)	70 %	690
Grain	Monachijski	0.5 kg (7.3%)	80 %	16
Grain	Pszeniczny	0.5 kg (7.3%)	85 %	4
Grain	Jęczmień palony	0.2 kg (2.9%)	55 %	985

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	30 g	60 min	7 %
Aroma (end of boil)	Vic Secret	45 g	5 min	16.3 %

## Yeasts

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