

# Hoppy Chocolate stout

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **32**
- SRM **39.5**
- 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 **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

## Steps

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

## Mash step by step

- Heat up **13.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **16.3 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	1.4 kg (31.1%)	80 %	5
Grain	Viking Wheat Malt	1 kg (22.2%)	83 %	5
Grain	Viking Pilsner malt	0.2 kg (4.4%)	82 %	4
Grain	Biscuit Malt	0.6 kg (13.3%)	79 %	45
Grain	Strzegom Karmel 150	0.7 kg (15.6%)	75 %	150
Grain	Strzegom Czekoladowy ciemny	0.6 kg (13.3%)	68 %	1200

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	20 g	30 min	12 %
Whirlpool	Citra	30 g	15 min	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	10 g	safale