

# Robust Porter

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **38**
- SRM **38.9**
- Style **Robust Porter**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **19 liter(s)**

## Steps

- Temp **69 C**, Time **60 min**
- Temp **76 C**, Time **15 min**

## Mash step by step

- Heat up **14.3 liter(s)** of strike water to **77.1C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **15 min** at **76C**
- Sparge using **9.5 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (84.2%)	80 %	5
Grain	Strzegom Czekoladowy ciemny	0.5 kg (10.5%)	68 %	1200
Grain	Karmelowy Czerwony	0.25 kg (5.3%)	75 %	59

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	20 g	60 min	2.2 %
Boil	Mosaic	16 g	30 min	10 %
Aroma (end of boil)	Citra	20 g	5 min	12 %
Boil	Columbus/Tomahawk/Zeus	10 g	15 min	15.5 %

## Yeasts

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