

# Bitter

- Gravity **9.5 BLG**
- ABV **3.7 %**
- IBU **22**
- SRM **6.8**
- Style **Standard/Ordinary Bitter**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **30 min**
- Evaporation rate **15 %/h**
- Boil size **24.7 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **4.2 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **19.8 liter(s)**

## Steps

- Temp **69 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **10 min** at **78C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **24.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (78.9%)	80 %	5
Grain	Płatki owsiane	0.5 kg (13.2%)	60 %	3
Grain	Strzegom Karmel 150	0.3 kg (7.9%)	75 %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	25 g	30 min	8.3 %
Boil	East Kent Goldings	25 g	5 min	3.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Lutra OYL-071	Ale	Liquid	500 ml	Omega Labs

## Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	15 min