

# Bitter

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **50**
- SRM **4.9**
- 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 **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 **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **76C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (72.7%)	81 %	4
Grain	Weyermann - Carapils	0.5 kg (9.1%)	78 %	4
Grain	Monachijski	1 kg (18.2%)	80 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	30 g	60 min	11.5 %
Boil	lunga	20 g	20 min	11 %
Aroma (end of boil)	Saaz (Czech Republic)	50 g	0 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Fermentis