

# bitter

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- Gravity **13.8 BLG**
- ABV ---
- IBU **13**
- SRM **34.4**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **25.9 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **68 C**, Time **70 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	słód pilzneński	4 kg (80%)	80 %	80
Grain	słód monachijki	1 kg (20%)	75 %	100

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	ekg	35 g	30 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
monsdrat	Lager	Dry	50 g	---

## Extras

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