

# Bitter

- Gravity **9.8 BLG**
- ABV **3.8 %**
- IBU **23**
- SRM **15.5**
- Style **Special/Best/Premium Bitter**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **14 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **8.3 liter(s)**
- Total mash volume **10.4 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **8.3 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **14 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	1.2 kg (57.7%)	80 %	4
Grain	Pszeniczny	0.31 kg (14.9%)	85 %	4
Grain	Fawcett - Dark Crystal	0.07 kg (3.4%)	71 %	300
Grain	Fawcett - Brown	0.1 kg (4.8%)	72 %	180
Grain	Abbey Castle	0.18 kg (8.7%)	80 %	45
Grain	Biscuit Malt	0.17 kg (8.2%)	79 %	45
Grain	Fawcett - Pszeniczny Czekoladowy	0.05 kg (2.4%)	73 %	1001

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	5 g	60 min	8.8 %
Boil	Izabella	10 g	60 min	5.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Verdant	Ale	Slant	80 ml	Lallemand
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