

# Bitter

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **35**
- SRM **9.5**
- Style **Special/Best/Premium Bitter**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **13.8 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **6.3 liter(s)**
- Total mash volume **8.8 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **6.3 liter(s)** of strike water to **73.9C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **1 min** at **78C**
- Sparge using **10 liter(s)** of **76C** water or to achieve **13.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale malt	1.85 kg (74%)	80 %	5
Grain	Simpsons - Caramalt Premium	0.2 kg (8%)	76 %	60
Grain	Simpsons - Caramalt	0.2 kg (8%)	76 %	36
Grain	Simpsons - Crystal Light	0.25 kg (10%)	74 %	100

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	10 g	40 min	13 %
Boil	Amarillo	25 g	5 min	8.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM11 Wichrowe Wzgórza	Ale	Slant	50 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech Irlandzki	2 g	Boil	10 min