

# bitter

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **24**
- SRM **7.1**
- Style **Special/Best/Premium Bitter**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **75 min**
- Evaporation rate **18 %/h**
- Boil size **38.3 liter(s)**

## Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **18.9 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **76C**
- Sparge using **24.8 liter(s)** of **76C** water or to achieve **38.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Maris Otter - Thomas Fawcett	5 kg (92.6%)	83 %	6
Grain	Crystal Malt Thomas Fawcett	0.4 kg (7.4%)	--- %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Goldings	37.5 g	60 min	5.7 %
Boil	Goldings	37.5 g	10 min	5.7 %
Boil	Goldings	25 g	0 min	5.7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM10 O czym szumią wierzby	Ale	Liquid	40 ml	---