

# bitter

- Gravity **10 BLG**
- ABV **4 %**
- IBU **36**
- SRM **7.9**
- Style **Special/Best/Premium Bitter**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.1 liter(s)**

## Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **4.6 liter(s)**
- Total mash volume **6.5 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**

## Mash step by step

- Heat up **4.6 liter(s)** of strike water to **77.7C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **9.4 liter(s)** of **76C** water or to achieve **12.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Bestt Pale Ale	1.5 kg (81.1%)	80.5 %	6
Grain	Pszeniczny	0.1 kg (5.4%)	85 %	4
Grain	Abbey Malt Weyermann	0.15 kg (8.1%)	75 %	45
Grain	Fawcett - Dark Crystal	0.1 kg (5.4%)	71 %	210

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Magnum	10 g	60 min	6.4 %
Boil	Fuggles	4 g	60 min	6.1 %
Boil	East Kent Goldings	10 g	15 min	5.1 %
Boil	Fuggles	10 g	15 min	6.1 %
Boil	Fuggles	10 g	0 min	6.1 %
Boil	East Kent Goldings	10 g	0 min	5.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM10 O czym szumią wierzby	Ale	Slant	100 ml	Fermentum Mobile