

## Bitter2

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **28**
- SRM **5.3**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **28.1 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **28.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale ale Malteurop	4.5 kg (90%)	80 %	8
Grain	Carahell	0.3 kg (6%)	77 %	26
Grain	płatki jęczmienne opiekane	0.15 kg (3%)	65 %	5
Grain	płatki żytnie opiekane	0.05 kg (1%)	78 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	40 g	60 min	5.5 %
Boil	Tradition	20 g	15 min	5.5 %
Whirlpool	Tradition	20 g	0 min	5.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
WLP004 - Irish Ale Yeast	Ale	Liquid	300 ml	White Labs

### Extras

Type	Name	Amount	Use for	Time
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Fining	whirlfloc t	0.5 g	Boil	10 min
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