

## Bitter #2

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- Gravity **10.2 BLG**
- ABV ---
- IBU **30**
- SRM **8.4**
- Style **Standard/Ordinary 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 **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **9.5 liter(s)**
- Total mash volume **13.3 liter(s)**

### Steps

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

### Mash step by step

- Heat up **9.5 liter(s)** of strike water to **77.6C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **23.3 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Malt Europe	3 kg (78.9%)	80 %	7
Grain	Karmelowy Strzegom	0.2 kg (5.3%)	80 %	30
Grain	Brown Malt (British Chocolate)	0.2 kg (5.3%)	70 %	150
Grain	Barley, Flaked	0.4 kg (10.5%)	70 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	10.5 %
Aroma (end of boil)	Golding	20 g	15 min	6.1 %
Aroma (end of boil)	Fuggles	20 g	15 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM11 Wichrowe Wzgórza	Ale	Slant	150 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
Finning	Mech irlandzki	4 g	Boil	5 min