

## Bitter #43

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- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **32**
- SRM **7.6**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

### Steps

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

### Mash step by step

- Heat up **15.9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	2.5 kg (47.2%)	81 %	6
Grain	Weyermann - Pale Ale Malt	2.2 kg (41.5%)	85 %	7
Grain	Strzegom Karmel 150	0.2 kg (3.8%)	75 %	150
Grain	Carahell	0.4 kg (7.5%)	77 %	26

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	5.2 %
Boil	Fuggles	30 g	60 min	4.3 %
Boil	Fuggles	60 g	10 min	4.3 %
Aroma (end of boil)	Fuggles	30 g	0 min	4.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	---

### Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	7 g	Boil	10 min