

## BITTER 2

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **42**
- SRM **11.7**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **3 %**
- Size with trub loss **23.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **28.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.1 liter(s)**
- Total mash volume **25.4 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **74 C**, Time **1 min**

### Mash step by step

- Heat up **19.1 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **1 min** at **74C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **28.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	5.5 kg (86.6%)	81 %	6
Grain	Simpsons - Crystal light	0.4 kg (6.3%)	69 %	105
Grain	Simpsons - Amber Malt	0.4 kg (6.3%)	69 %	65
Grain	Weyermann - Carafa II special	0.05 kg (0.8%)	65 %	1100

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zula	35 g	60 min	7 %
Boil	Zula	35 g	20 min	7 %
Boil	Zula	30 g	7 min	7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	150 ml	---

### Extras

Type	Name	Amount	Use for	Time
Fining	whirlfloc tabletki	1.2 g	Boil	10 min
Water Agent	chlerek wapnia 99%	5 g	Boil	60 min

### Notes

- Carafa na wygrzew tylko dla podbicia koloru. Moczona przez noc w lodówce.  
*Sep 25, 2020, 11:21 AM*