

## Extra Bitter #1

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **23**
- SRM **15.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### 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 **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **21.6 liter(s)**
- Total mash volume **27 liter(s)**

### Steps

- Temp **53 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **21.6 liter(s)** of strike water to **57.1C**
- Add grains
- Keep mash **10 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Sparge using **9.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	3 kg (55.6%)	81 %	6
Grain	Biscuit Malt	0.25 kg (4.6%)	79 %	45
Grain	Pszeniczny	0.5 kg (9.3%)	85 %	4
Grain	Cara Gold Castlemalting	0.25 kg (4.6%)	78 %	120
Grain	Caramel/Crystal Malt - 10L	0.1 kg (1.9%)	75 %	20
Grain	Brown Malt (British Chocolate)	0.1 kg (1.9%)	70 %	128
Grain	Czekoladowy pszeniczny	0.1 kg (1.9%)	60 %	788
Grain	Płatki owsiane	0.3 kg (5.6%)	85 %	3
Grain	Chit Malt	0.75 kg (13.9%)	50 %	2
Grain	Jęczmień palony	0.05 kg (0.9%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tettnang	25 g	45 min	4 %

Boil	East Kent Goldings	25 g	15 min	5.1 %
Boil	Tettnang	25 g	15 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM10 O czym szumią wierzby	Ale	Slant	1500 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	sól	5 g	Boil	60 min

## Notes

- F1 - 29/09 - 12 BLG  
F2 - 09/10 - 5 BLG  
but. - 03/11 - 3 BLG,  
CO2 vol 1,8

ABV 4.9% Odfermentowanie 75.8%  
*Nov 3, 2019, 9:55 AM*

- Lepiej przerobić na STOUT  
+ laktoza  
+ IBU  
+ muscavado  
- mnije karmelu  
- inne drożdże  
min 16 BLG  
*Dec 1, 2019, 7:19 PM*