

# Best Bitter Angielski - FM-13 - 20-09-2020 r.

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **27**
- SRM **6.6**
- 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 **3.5 liter(s) / kg**
- Mash size **15.2 liter(s)**
- Total mash volume **19.6 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15.2 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Maris Otter Low Colour Thomas Fawcett	4 kg (92%)	81 %	4.9
Grain	Special B Malt	0.1 kg (2.3%)	65.2 %	315
Grain	Carahell	0.25 kg (5.7%)	77 %	26

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Minstrel	20 g	60 min	4.9 %
Boil	Minstrel	20 g	30 min	4.9 %
Aroma (end of boil)	Minstrel	60 g	5 min	4.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	100 ml	Fermentum Mobile