

# bitter

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **31**
- SRM **5.9**
- Style **Standard/Ordinary Bitter**

## Batch size

- Expected quantity of finished beer **29 liter(s)**
- Trub loss **2 %**
- Size with trub loss **30.2 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **34.5 liter(s)**

## Mash information

- Mash efficiency **95 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

## Steps

- Temp **68 C**, Time **48 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15.6 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **48 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **24.1 liter(s)** of **76C** water or to achieve **34.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale	4 kg (77.1%)	81 %	5
Grain	Strzegom Monachijski typ I	1 kg (19.3%)	79 %	16
Grain	Weyermann Caramunich 3	0.19 kg (3.7%)	76 %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	40 g	60 min	5.1 %
Boil	Fuggles	40 g	40 min	4.7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
WLP007 - Dry English Ale Yeast	Ale	Dry	100 g	White Labs

## Notes

- w garze ok 35l 10brix (musiałem dolać 5l wody do poprawnej gęstości). nistety odparowało 5(!) litrów mimo gotowania 90% czasu pod przykryciem do 12,5 brix i poszło 30 litrów do fermentora  
9.04 2,5 blg  
po cichej butelkowanie 150g glukozy i wit. C - 17.04.202

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