

## tym razem bitter na prawilnie

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- Gravity **8.8 BLG**
- ABV **3.4 %**
- IBU **34**
- SRM **8.6**
- Style **Standard/Ordinary Bitter**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **19.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9 liter(s)**
- Total mash volume **11.6 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **6 min**

### Mash step by step

- Heat up **9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **6 min** at **76C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **19.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	fawcett - pale ale marris otter	2.3 kg (89.5%)	81 %	5
Grain	Fawcett - Crystal	0.25 kg (9.7%)	70 %	160
Grain	Weyermann - Chocolate Wheat	0.02 kg (0.8%)	74 %	788

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	30 g	60 min	5.7 %
Aroma (end of boil)	East Kent Goldings	25 g	5 min	5.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand - LalBrew Verdant IPA	Ale	Dry	11.5 g	---

### Extras

Type	Name	Amount	Use for	Time
Water Agent	gips piwowarski	5 g	Mash	---