

## #40 Bitter

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- Gravity **8.5 BLG**
- ABV ---
- IBU **46**
- SRM **6.8**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **29.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.8 liter(s)**
- Total mash volume **14.4 liter(s)**

### Steps

- Temp **72 C**, Time **90 min**

### Mash step by step

- Heat up **10.8 liter(s)** of strike water to **80.7C**
- Add grains
- Keep mash **90 min** at **72C**
- Sparge using **22.7 liter(s)** of **76C** water or to achieve **29.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3.2 kg (88.9%)	79 %	6
Grain	Crystal 150	0.3 kg (8.3%)	74 %	150
Grain	Acid Malt	0.1 kg (2.8%)	58.7 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	45 g	60 min	7 %
Boil	Fuggles	25 g	15 min	4.5 %
Boil	Fuggles	20 g	0 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM10 O czym szumią wierzby	Ale	Liquid	800 ml	Fermentum Mobile