

## Bitter #1

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- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **89**
- SRM **11.8**
- 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 **2.5 liter(s) / kg**
- Mash size **10.6 liter(s)**
- Total mash volume **14.9 liter(s)**

### Steps

- Temp **67 C**, Time **90 min**

### Mash step by step

- Heat up **10.6 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **90 min** at **67C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.7 kg (87.1%)	80 %	5
Grain	Strzegom Karmel 150	0.5 kg (11.8%)	75 %	150
Grain	Fawcett - Pszeniczny Czekoladowy	0.05 kg (1.2%)	73 %	1001

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	100 g	60 min	7.6 %