

Bitter v.1

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **35**
- SRM **7.9**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **17.8 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **13.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale - Soufflet	3.5 kg (78.7%)	80 %	5
Grain	Crystal - Castle Malting	0.15 kg (3.4%)	75 %	30
Grain	Biscuit - Castle Malting	0.3 kg (6.7%)	79 %	45
Grain	Strzegom Monachijski typ II	0.2 kg (4.5%)	79 %	22
Grain	Strzegom Karmel 150	0.3 kg (6.7%)	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Bramling Cross (UK)	25 g	60 min	6.1 %
Boil	Challenger (UK)	15 g	60 min	5.8 %
Boil	Bramling Cross (UK)	25 g	20 min	6.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Lallemand - Lalbrew London English-style	Ale	Dry	11.5 g	Lallemand
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