

# Bitter

- Gravity **12.1 BLG**
- ABV ---
- IBU **39**
- SRM **11.3**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **27 liter(s)**
- Total mash volume **32.4 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**

## Mash step by step

- Heat up **27 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **4.8 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Colorado - Pale Malt	2 kg (37%)	81 %	4
Grain	Mild Malt	2 kg (37%)	80 %	8
Grain	Colorado - Honig Malt	0.5 kg (9.3%)	80 %	15
Grain	Fawcett Amber	0.2 kg (3.7%)	70 %	125
Grain	Strzegom Pszeniczny	0.5 kg (9.3%)	81 %	6
Grain	Bestmalz - Special X	0.1 kg (1.9%)	80 %	400
Grain	Bestmalz - Special X	0.1 kg (1.9%)	80 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Bramling Cross	20 g	45 min	4 %
Boil	Pilgrim	15 g	45 min	8.5 %
Boil	Bramling Cross	15 g	30 min	4 %
Boil	Pilgrim	15 g	15 min	8.5 %
Boil	Bramling Cross	15 g	15 min	4 %
Boil	Pilgrim	20 g	5 min	8.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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WLP006 - Bedford British	Ale	Slant	40 ml	White Labs
Safale US-05	Ale	Dry	11 g	Fermentis

## Notes

- Warka dzielona, różne drożdże  
*May 1, 2017, 9:53 AM*