

# Breakfast Bitter

- Gravity **9.5 BLG**
- ABV **3.7 %**
- IBU **31**
- SRM **11.5**
- Style **Standard/Ordinary Bitter**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **0 %**
- Size with trub loss **20 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.1 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.4 liter(s)**
- Total mash volume **16 liter(s)**

## Steps

- Temp **62 C**, Time **25 min**
- Temp **72 C**, Time **35 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **12.4 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **25 min** at **62C**
- Keep mash **35 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **23.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3.1 kg (87.3%)	79 %	6
Grain	Crystal II 200	0.2 kg (5.6%)	71.1 %	200
Grain	Strzegom Bursztynowy	0.15 kg (4.2%)	72 %	50
Grain	Strzegom Karmel 600	0.1 kg (2.8%)	68 %	600

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	30 g	60 min	4.5 %
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Aroma (end of boil)	Fuggles	10 g	5 min	4.5 %
Whirlpool	Fuggles	10 g	30 min	4.5 %
Dry Hop	Fuggles	15 g	3 day(s)	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	5 g	Boil	15 min
Water Agent	Gips piwowarski	3 g	Mash	60 min