

# STRONG BITTER

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **41**
- SRM **6.9**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

## 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 **3.33 liter(s) / kg**
- Mash size **18.3 liter(s)**
- Total mash volume **23.8 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **18.3 liter(s)** of strike water to **74.1C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **76C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Château Maris Otter Castle Malting	5 kg (90.9%)	--- %	4
Grain	Słód Château Biscuit Castle Malting	0.2 kg (3.6%)	--- %	50
Grain	Słód karmelowy 100 - Viking Malt (Strzegom)	0.1 kg (1.8%)	--- %	100
Grain	Słód karmelowy 200 - Viking Malt (Strzegom)	0.1 kg (1.8%)	--- %	200
Grain	Słód zakwaszający Weyermann®	0.1 kg (1.8%)	--- %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	30 g	60 min	5.8 %
Boil	East Kent Goldings	30 g	30 min	6.3 %
Whirlpool	East Kent Goldings	30 g	30 min	6.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Fermentis Safale S-04	Ale	Dry	23 g	Fermentis Safale
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### Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc T	1.25 g	Boil	5 min

### Notes

- chmielenie na whirlpool/hopstand 20 minut od 80°C;  
schłodzenie brzeczki do temp. 15-16°C;  
fermentacja - temperatura piwa w głównej fazie fermentacji 17-18°C, dojrzewanie w temp. 19-20°C;  
rozlew - poziom nasycenia 1,8-1,9 vol.;  
refermentacja - 14 dni

profil wody (ppm): Ca 75-125; Mg 10; SO4 150-300; Cl 50-100; Alk. całk. 0-50; RA -100-0  
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