

# Bitter

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **42**
- SRM **6.6**

## Batch size

- Expected quantity of finished beer **130 liter(s)**
- Trub loss **0 %**
- Size with trub loss **130 liter(s)**
- Boil time **75 min**
- Evaporation rate **5 %/h**
- Boil size **151.9 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **93.8 liter(s)**
- Total mash volume **131.3 liter(s)**

## Steps

- Temp **67 C**, Time **70 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **93.8 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **95.6 liter(s)** of **76C** water or to achieve **151.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	32.5 kg (86.7%)	79 %	6
Grain	Strzegom Karmel 30	5 kg (13.3%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	200 g	60 min	10.5 %
Boil	Challenger	100 g	15 min	7 %
Boil	Fuggles	50 g	15 min	4.5 %
Boil	Fuggles	50 g	5 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
us-04	Ale	Slant	1000 ml	---

## Notes

- 1 warka:  
zacierania bardziej na słodko 67-70 stopni, zeszło do 5 blg niezależnie od użytych drożdży, w smaku słodkie, goryczka ciężka, zalegająca, ściągająca.  
*Aug 7, 2018, 12:57 PM*