

# Hops

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **28**
- SRM **3.7**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **50 C**, Time **20 min**
- Temp **62 C**, Time **20 min**
- Temp **70 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **54.3C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **20 min** at **62C**
- Keep mash **30 min** at **70C**
- Keep mash **10 min** at **76C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (100%)	80 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	20 g	60 min	11.8 %
Boil	Lublin (Lubelski)	30 g	10 min	2.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM12 W szkocką kratę	Ale	Liquid	30 ml	Fermentum Mobile