

# Gorzkie żALE

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **41**
- SRM **12.5**
- Style **American Amber Ale**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **1 %**
- Size with trub loss **10.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **12.4 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **8.6 liter(s)**
- Total mash volume **11.1 liter(s)**

## Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **8.6 liter(s)** of strike water to **71.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **6.3 liter(s)** of **76C** water or to achieve **12.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.8 kg (72.9%)	80 %	6
Grain	Strzegom Pilzneński	0.15 kg (6.1%)	80 %	4
Grain	Strzegom Karmel 150	0.42 kg (17%)	75 %	150
Grain	Płatki jęczmienne	0.1 kg (4%)	80 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	10 g	60 min	8.5 %
Boil	Cascade	5 g	60 min	6 %
Boil	Amarillo	5 g	30 min	9.5 %
Boil	Cascade	5 g	30 min	6 %
Aroma (end of boil)	Cascade	10 g	5 min	6 %
Dry Hop	Cascade	10 g	5 day(s)	6 %
Dry Hop	Amarillo	5 g	5 day(s)	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Safle US-05	Ale	Slant	250 ml	---
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### Extras

Type	Name	Amount	Use for	Time
Fining	Mech Irlandzki	5 g	Boil	5 min