

# Bezglutenowe

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **37**
- SRM ---
- Style **American 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 **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

## Steps

- Temp **45 C**, Time **20 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **21 liter(s)** of strike water to **49.2C**
- Add grains
- Keep mash **20 min** at **45C**
- Keep mash **30 min** at **72C**
- Sparge using **11.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód gryczany	5 kg (71.4%)	48 %	---
Grain	Grys kukurydziany	1 kg (14.3%)	80 %	---
Grain	Płatki ryżowe	0.5 kg (7.1%)	85 %	---
Grain	Proso	0.5 kg (7.1%)	51 %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	30 g	60 min	9.5 %
Boil	Amarillo	20 g	5 min	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Spice	Trawa cytrynowa	50 g	Boil	5 min
Spice	Curacao	20 g	Boil	15 min