Bezglutenowe 100l

- Gravity **8 BLG**
- ABV **3.1 %**
- IBU **36**
- SRM **---**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **100 liter(s)**
- Trub loss **5 %**
- Size with trub loss **106 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **127.6 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **81.9 liter(s)**
- Total mash volume **105.3 liter(s)**

Steps

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

Mash step by step

- Heat up **81.9 liter(s)** of strike water to **48.6C**
- Add grains
- Keep mash **20 min** at **45C**
- Keep mash **30 min** at **72C**
- Sparge using **69.1 liter(s)** of **76C** water or to achieve **127.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód gryczany	13.35 kg *(57.1%)*	48 %	---
Grain	Grys kukurydziany	3.35 kg *(14.3%)*	80 %	---
Grain	Płatki ryżowe	3.35 kg *(14.3%)*	85 %	---
Grain	Proso	3.35 kg *(14.3%)*	51 %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	33.35 g	60 min	9.5 %
Boil	Amarillo	33.35 g	45 min	9.5 %
Boil	Amarillo	66.65 g	30 min	9.5 %
Boil	Amarillo	66.65 g	15 min	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	57.5 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Spice	Trawa cytrynowa	150 g	Boil	5 min

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Spice	Curacao	66.65 g	Boil	15 min